

GUAM DIVISION OF AQUATIC AND WILDLIFE RESOURCES ANNUAL PERFORMANCE REPORTS

FY 2006

March 26, 2007

Division of Aquatic and Wildlife Resources
Department of Agriculture
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**GUAM FISH AND WILDLIFE
COORDINATION
FW-3C-14**

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: FW-3C-14

Grant name: Guam Fish and Wildlife Coordination

Project number and name: C-1, Job 1. Coordination of Guam's Fish and Wildlife Programs

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal :	\$145,000	\$94,000
State		
Other:		
Total Federal:	\$145,000	\$94,000
Total match		
Total project:	\$145,000	\$94,000

5. Objectives:

To plan, coordinate, supervise, and administer all Sport Fish and Wildlife Restoration Programs during the granting period.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives were met by the following:

1. The Chief and Assistant Chief insured the attendance of staff at meetings focused on natural resource issues, planned and documented activities pertaining to fish and wildlife programs. The Chief of DAWR and his personnel represented the Department of Agriculture with the following duties: 1) All regulatory matter relating to fish and wildlife resources. This frequently entailed meeting with other local and federal agencies, including the US Navy and Air Force; 2) Administration and coordination responsibilities, which are 50% contributed by local funds; 3) the Chief attended the Federal Assistance Coordinator’s meeting in Homer, Alaska. The Assistant Chief attended the U. S. Coral Reef Task Force in Palau, and the 8th Micronesian Island Conservation Retreat in Saipan, Commonwealth of the Northern Marianas Islands, to participate in discussion on the Micronesian Challenge regarding natural resources.
2. Staff was tasked with submitting documents including grant proposals, grant agreements, and performance reports pertaining to all funding sources. The documentation included annual Grant Agreements for 1) Project FW-3C, Guam Fish and Wildlife Coordination, which is jointly funded by Wildlife and Sport Fish Funds; 2) Project F-1-R, Guam Sport Fish Investigation, which covers sport fish research, surveys, and related activities funded by Sport Fisheries (DJ) funding; and 3) W-1-R, Guam Wildlife Investigations and survey activity. In addition, annual Grant Agreements were prepared for the Division’s various Fisheries Development and Endangered Species Recovery (Section 6) projects. The State Wildlife Grants were extended or obligated to fund wildlife projects, as well as for other federal assistance grants that required it.
3. Wildlife: Wildlife Staff did not make any trips under Wildlife Restoration. Staff shortages prevented any travel during this period.
4. Fisheries: Fisheries Staff attended various meetings including: the Coral Reef Ecosystem Plan Team Meeting, Pelagic Plan Team Meeting, and Bottomfish Plan Team Meeting in Honolulu, Hawaii, sponsored by the Western Pacific Fisheries Management Council. Staff also attended the first Oceanic Fisheries Management Project Stock Assessment Workshop in Noumea, New Caledonia, as well a Habitat Restoration Workshop.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. If you did work under this grant that was not captured in the discussion above or if you were unable to accomplish some of the

work anticipated in the granting documents, please explain the differences in approach, results, and costs.

9. List any publications or in-house reports resulting from this work. Provide citations, including status (indicate if not completed), note any that are included with this report, and note where reports or publications may be obtained.

Division of Aquatic and Wildlife Resources. 2006. Coordination of Guam's Fish and Wildlife Programs. Guam, Department of Agriculture. Annual Report.

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: FW-3C-14

Grant name: Guam Fish and Wildlife Coordination

Project number and name: C-3: Division of Aquatic and Wildlife Resources Backup Generator

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal:	\$75,000	\$0
State		
Other: W-1-R-14	\$20,000	
T-2-D	\$25,000	
Total Federal:	\$120,000	\$0
Total match		
Total project:	\$120,000	\$0

7. Objectives:

To provide reliable power supply to the Administration Section of DAWR during Guam's frequent power outages due to storms, earthquakes, and other adverse conditions. The total estimated cost is \$120,000.

8. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

9. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

This project is ongoing as various grant programs were amended in order to provide cost-share funding. This included the Wildlife and Sport Fish Restoration Grants, and State Wildlife Grants. The design and installation of the project will be accomplished in FY07 because it is anticipated that the main building will be utilized by the Division of Aquatic and Wildlife Resources

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. If you did work under this grant that was not captured in the discussion above or if you were unable to accomplish some of the work anticipated in the granting documents, please explain the differences in approach, results, and costs.

9. List any publications or in-house reports resulting from this work. Provide citations, including status (indicate if not completed), note any that are included with this report, and note where reports or publications may be obtained.

Division of Aquatic and Wildlife Resources. 2006. Coordination of Guam’s Fish and Wildlife Programs. Guam, Department of Agriculture. Annual Report.

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SPORT FISH RESTORATION
FY 2006
F-1R-14

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1-R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 1. Management of Guam's Marine Fisheries Resources. Job 1. Offshore Fisheries Participation, Effort, and Harvest Surveys

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Island of Guam

4. Costs:

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : _____	\$65,698	\$57,088.95
State _____		
Other: _____		

Total Federal	\$65,698	\$57,088.95
Total match		
Total project:	\$65,698	\$57,088.95

5. Objectives:

- a. To monitor the health of Guam's reef, bottom, and pelagic fishery resource by conducting 192 offshore surveys each year at the three largest boat-launching facilities on island.
- b. To continue gathering limited biological data that will add to a long-term historical database on Guam's fish species by conducting 192 offshore surveys over a one-year period at the three largest boat-launching facilities on island.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

GDAWR’s Fisheries Section, conducted 192 offshore surveys (96 survey days with an AM and PM shift) including offshore creel surveys at the Agana Boat Basin (four a month), the Agat Marina (twice a month), and the Merizo Pier (twice a month), as well as participation surveys conducted four (4) times a month around the entire island to obtain data on islandwide boat based activity. This data is expanded to estimate the amount of fish harvested by boat-based methods and to identify trends in the fishery.

Table 1 summarizes the top five (5) methods encountered by boat-based methods, with total harvests for all methods. Comparing FY05 and FY06 values, Total Harvest increased 32%, trolling increased 37%, bottomfishing decreased 58%, SCUBA spearing decreased 63%, snorkel spearing increased 26%, and gillnetting decreased 50%. The decrease in SCUBA spearfishing may be primarily because of fishermen refusing to be surveyed.

Table 1: Five (5) Year Harvest Totals for the Primary Boat-Based Methods

Year*	Total Harvest (metric tons)	Trolling* (metric tons)	Bottomfishing (metric tons)	SCUBA Spearfishing (metric tons)	Snorkel Spearfishing (metric tons)	Gillnet (metric tons)
2002	322.1	248.8	25.6	24.5	14.1	0.8
2003	367.2	272.2	38.3	21.3	15.2	18.0
2004	334.3	262.3	23.4	27.5	13.2	4.0
2005	220.4	165.4	29.7	12.8	6.1	4.6
2006	291.2	227.1	47.0	4.8	7.7	2.3
5-year Average	307.0	235.2	32.8	18.2	11.3	6.0

*Fishermen jigging for pelagic fish at FADs may occasionally report their method as trolling, as per observation at FADs.

Table 2 shows the five-year trends of the CPUE for the six most commonly encountered methods. Comparing FY05 and FY06 CPUE values, trolling increased 22%, bottomfishing increased 26%, SCUBA spearing decreased 39%, snorkel spearing decreased 2%, jigging increased 45%, and gillnetting decreased 8%. Surveys of methods other than trolling may need to be intercepted more often in order to obtain more accurate CPUE values.

Table 2: Five (5) Year Average CPUE for the Primary Boat-Based Methods

Year	Trolling CPUE (kg/gear-hour)	Bottomfishing CPUE (kg/gear-hour)	SCUBA Spearfishing CPUE(kg/gear-hour)	Snorkel Spearfishing CPUE (kg/gear-hour)	Jigging CPUE (kg/gear-hour)	Gillnet CPUE(kg/gear-hour)
2002	1.52 (467)*	0.41(158)	4.33 (16)	1.77 (33)	1.10 (2)	5.64 (11)
2003	2.20	0.63	5.27	2.92	1.10	8.46
2004	2.23	0.51	5.12	1.83	0.62	5.37
2005	1.61	0.69	3.32	1.24	0.76	6.27
2006	1.97 (388)	0.87 (100)	2.01 (5)	1.22 (24)	1.10 (1)	5.80 (6)
5-year Average	2.0	0.6	4.6	2.0	0.8	6.7

*Numbers in brackets indicate number of actual interviews used to expand for yearly harvest totals.

During FY06, trolling was dominated by bonita with 70,898 kg. Bottomfishing was dominated by onaga with 4,637 kg while spearfishing was dominated by trochus with 2,624 kg. Data from FY06 appear to imply that deepwater bottomfish species are overtaking shallow bottomfish species in total harvest. Because an invertebrate was the top species harvested by spearfishing, the spearing data may be a reflection of a lack of large preferred foodfish available, such as parrotfish, groupers, jacks, and wrasses, and a refusal by most SCUBA fishermen to be surveyed in 2006.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

Guam. Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region, 2004 Annual Report. Western Pacific Regional Fishery Management Council. Honolulu, Hawaii.

Guam. Pelagic Fisheries of the Western Pacific Region, 2004 Annual Report. Western Pacific Regional Fishery Management Council. Honolulu, Hawaii.

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 1. Management of Guam's Marine Fisheries Resources. Job 2. Inshore Fisheries Participation, Effort, and Harvest Surveys

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam, Island-Wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$159,538	\$80,887.05
State		
Other: _____		

Total Federal	\$159,538	\$80,887.05
Total match		
Total project:	\$159,538	\$80,887.05

5. Objectives:

- a. To monitor the health of Guam's reef and bottom fishery resource by conducting 192 inshore surveys each year along the coastline of Guam.
- b. To continue gathering limited biological data that will add to a long-term historical data base on Guam's fish species by conducting 192 inshore surveys each year along the coastline of Guam.
- c. To monitor the health of Guam's reef and bottom fishery resource by conducting 24 aerial surveys each year along the coastline of Guam.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

The project is part of the ongoing collaborative efforts between GDAWR, the Western Pacific Fishery Management Council, and the Pacific Fishery Science Center to combine the inshore and offshore creel data to enable more appropriate and accurate fishery data summaries and interpretation, which may be used to promulgate laws to properly manage Guam's food fish resources. Some funding, technical support, hardware and software, and travel opportunities were provided by the Western Pacific Fishery Management Council and the Pacific Fishery Science Center. However, the bulk of the funding for the Inshore Creel Program is provided through Federal Aid.

7. Describe how the objectives were met. See "Supplemental Information" for additional requirements and "Attachments" for specialized tables.

Inshore Surveys

A total of 192 inshore creel and participation surveys (96 creel surveys and 96 participation surveys) were conducted along Guam's shoreline during FY06. A total of 56.4 metric tons was harvested by shore-based methods in FY06. An increase of 42% compared with FY05 of 39.6 metric tons. Catch Per Unit Effort (CPUE) for snorkel spearfishing increased 21% from 0.67 kg/gear-hour in FY05 to 0.81 kg/gear-hour in FY06. Subsequently, CPUE for castnetting increased 207% from 0.14 kg/gear-hour in FY05 to 0.43 kg/gear-hour in FY06. In contrast, CPUE for gillnetting decreased 24% from 0.63 kg/gear-hour in FY05 to 0.48 kg/gear-hour in FY06, and CPUE for hook-and-line remained stable with 0.9 kg/gear-hour.

Table 1: Summary of Top Seven (7) Shore-Based Fish Species Caught by Method

Species	Hook and Line (kg)	Castnet (kg)	Gillnet (kg)	Snorkel Spear (kg)	Hooks and Gaff (kg)	Total (kg)
<i>Caranx i'e</i> or juvenile <i>Caranx</i>	4,539	2,908	39	1		7,491
<i>Naso unicornis</i> Unicorn Fish	51	3,891	1,442	1,220		7,140
<i>Siganus spinus</i> Rabbitfish	869	1,186	495	472		3,939
<i>Kyphosus cinerascens</i> Rudderfish		3,298	423	53		3,780
<i>Octopus cyanea</i> Octopus				741	2,337	3,080
<i>Mulloidichthys flavolineatus</i> Goatfish		2,183	370	126		2,724
<i>Acanthurus triostegus</i> Convict Tang	75	1,566	441	372	3	2,652

Table 1 summarizes the top seven (7) species harvested during FY06 by shore-based methods. The top two species were the juvenile Caranx, or i'e (7.5 metric tons), usually from frequent pulse fishery events, and the unicorn fish (7.1 metric tons). Rabbitfish, rudderfish, octopus, goatfish, and the convict tang were the next five (5) top species. Large species, such as parrot fish, groupers, and snappers, did not make the seven (7) top shore-based species harvested.

Aerial Surveys

A total of 24 aerial surveys were conducted during FY06. The hook-and-line method was observed more frequently than other methods during the aerial surveys. A total of 850 marine animals were observed in FY06 compared with 872 animals during FY05. Turtles comprised the majority of these observations with 681 individuals observed, followed by 101 individual dolphins, 60 manta rays, 6 sharks, and 2 eagle rays. The 60 manta rays were observed as a single event heading northward on the northwest of the island. Approximately, 487 of the 681 turtles were observed from Achang River to Fofos Island. Turtle observations over a hundred per month were observed in November (100), January (153), and March (103). Next highest were June (86) and September (87). All other months had less than 57 individuals observed. With dolphin observations, most were observed in groups near protected bays. Sharks and eagle rays were rarely spotted during FY 06.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

N/A

9. List any publications or in-house reports resulting from this work.

Flores, T. "Bottomfish Plan Team Report" in Guam Module, *Bottomfish Plan Team annual Report, 2005*. Western Pacific Regional Management Council. Honolulu, HI.

Flores, T., Tibbatts, R. "Pelagic Plan Team Report in Guam Module, Pelagic Plan Team Annual Report, 2006. Western Pacific Regional Management Council, Honolulu, HI.

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Jay T. Gutierrez, Acting Assistant Chief, (671) 735-3980, jaytgutierrez@yahoo.com

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 1. Management of Guam's Marine Fisheries Resources. Job 3. Inshore Kid's Fishing Derby

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Island-wide

4. Costs:

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal :	\$ 32,367.00	\$13,801
State		
Other:		
Total Federal	\$ 32,367.00	\$13,801
Total match		
Total project:	\$ 32,367.00	\$13,801

5. Objectives:

- a. To teach sport fishing, provide new fishers with a positive fishing experience, and foster in them a conservation and management ethic by hosting two kid's fishing derbies each year for 75 participants at an appropriate site along the coastline of Guam.
- b. To provide an opportunity for parents and children to learn about and practice basic fishing skills, including knot-tying and casting by hosting fishing clinics and fishing derbies.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives were met by holding two separate one-day derbies at the Asan War in the Pacific National Historical Park, July 15 and July 29. Prior to the actual derbies, the general public and especially first time participants were invited to attend a fishing clinic held July 8th at the grounds adjacent to the Mangilao mayor’s office. The two Saturday derby dates were selected for having high tides during the two (2) hour fishing time, 9 a.m. to 11 a.m., based on information from the Guam Tide Chart book. High tides, rather than low tides, give the children a greater likelihood for catching fish using the hook-and-line fishing method while being restricted to the shoreline area. The event was a “catch-and-release” derby with a minimum fish size requirement. This gave the participants a chance to demonstrate marine conservation and fishing ethics. A total of 122 kids participated in the two derbies, at no cost to the participants.

While the Park’s shoreline area was restricted to the participants and their two adult guardians, other family members and friends were encouraged to attend but had to remain well away from the casting activity occurring at the shoreline. The age range of seven through 12 was chosen because children younger than seven (7) tend to lack the motor skills required to cast competitively for the entire age range, while children older than twelve (12) tend to have developed motor skills that make them cast significantly farther than the lower aged children, making the playing field unbalanced. Lastly, encouraging fishing as a recreational sport at this age range increases the likelihood that the individual will take up fishing as a lifelong recreational activity.

Prior to the actual fishing time, the participants and their guardians were given a 20-minute briefing at 8:30 a.m. on safety issues, the rules of the derby, the shoreline fishing area, considerations on spacing between participants, minimum fish size requirements, “catch and release” procedures, and the three (3) winning categories (Most Fish, Longest Fish, and Most Number of Species). Prize packages were given to the top three participants for each of the three categories, while all extra prizes were given to non-winners by raffling. For the two events, the longest fish was a cornet fish almost a meter long caught by a female competitor, the most fish caught was 21 by a male competitor, and six (6) was the most species caught by a female competitor. The “Most Fish” category was aimed towards participants that could demonstrate using a variety of hook-and-line techniques, such as being able to use live bait, artificial lure, and squid bait during the competition, rather using a single attractant such as squid. All the prizes were donated by local businesses, including fishing gear. Only Agriculture’s Fisheries staff are authorized by the Government of Guam to solicit for these events

8. Discuss differences between work anticipated in grant proposal and grant agreement and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The grant proposal stated that two separate events were to be held with a minimum of 75

kids at each event. However, the two derbies were held close enough that one registration process was used. Approximately 140 participants registered for the event. The participants were allowed to choose the date more convenient for them. Exactly 122 individual participants showed up for two events. One derby event did not have a minimum of 75 participants. To encourage participation, fisheries staff may want to include appearances on local radio talk shows. This should boost participation at the events. Lastly, coordination of the event had initial problems since the Program Coordinator was on leave on military status, and of the two GDAWR employees that ran the program in previous years, only one was present per event due to off-island work obligations. This resulted in late advertisements for the derby that affected the number of participants.

9. List any publications or in-house reports resulting from this work.

Please refer to the DAWR Website at ([http—www.guamdawr.org](http://www.guamdawr.org)) and Fisheries section annual reports (2005)

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: **Project 1.** Management of Guam's Marine Fisheries Resources. Job 10. Assessing Guam's Reef Fish Spawning Aggregations

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam, Island-Wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$16,251	-0-
State		
Other: _____		

Total Federal	\$16,251	-0-
Total match	-0-	-0-
Total project:	\$16,251	-0-

5. Objectives:

- a. Analyze 20 years of creel survey data to look for probable spawning aggregation encounters documented in the surveys to determine the species caught, approximate site location, date, time, tide, and moon phase by December 2005
- b. Interview knowledgeable local fishermen and fishermen identified by the creel data analysis as having located an aggregation to locate the site on a map and provide any details about aggregations they have witnessed by April 2006.
- c. Analyze and compile data and enter onto a GIS map by August 2006.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives were not met during FY06. However, the two first objectives will be accomplished during FY07. A sub-program, with the assistance of the Pacific Island Fishery Science Center (PIRO), may be needed in order to identify harvest trends indicating spawning locations. GDAWR will request from PIRO in FY07 that Guam's creel programs have this sub-program, as well as approach fishermen for their assistance with this project. The second objective may be more challenging because two groups of fishermen, the SCUBA spearfishers and the fishermen bordering Cocos Lagoon, are often not forthcoming with the creel surveyors. SCUBA spearfishers target most of the coastline during any year, and fishermen around Cocos Lagoon may be familiar with times of the year when certain fish aggregate. Commercial dive companies are third group that may be more forthcoming with providing information on possible spawning sites.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Because of staff shortages with one biologist on military active leave, other long-term projects, such as the boat-based, shore-based, and the freshwater biological data collection projects, were a priority to complete during FY06. In addition, the number of technical reviews and public presentations conducted during FY06 took up a significant amount of biological staff time, especially with the increase in the number of environmental reviews for military projects. GDAWR expects to remedy the staff shortages in the next fiscal year. GDAWR has made several requests from the Department of Administration (DOA) to send a list of applicants for the Fisheries Biologist positions. DOA is faced with staff shortages resulting in a delay in providing a list of applicants to GDAWR.

9. List any publications or in-house reports resulting from this work.

N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Edited by: Jay T. Gutierrez, Acting Assistant Chief, (671) 735-3980, jaytgutierrez@yahoo.com

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1-R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 2. Management of Guam's Freshwater Fisheries Resources. Job 1. Freshwater Monitoring Program

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Entire Island of Guam

4. Costs:

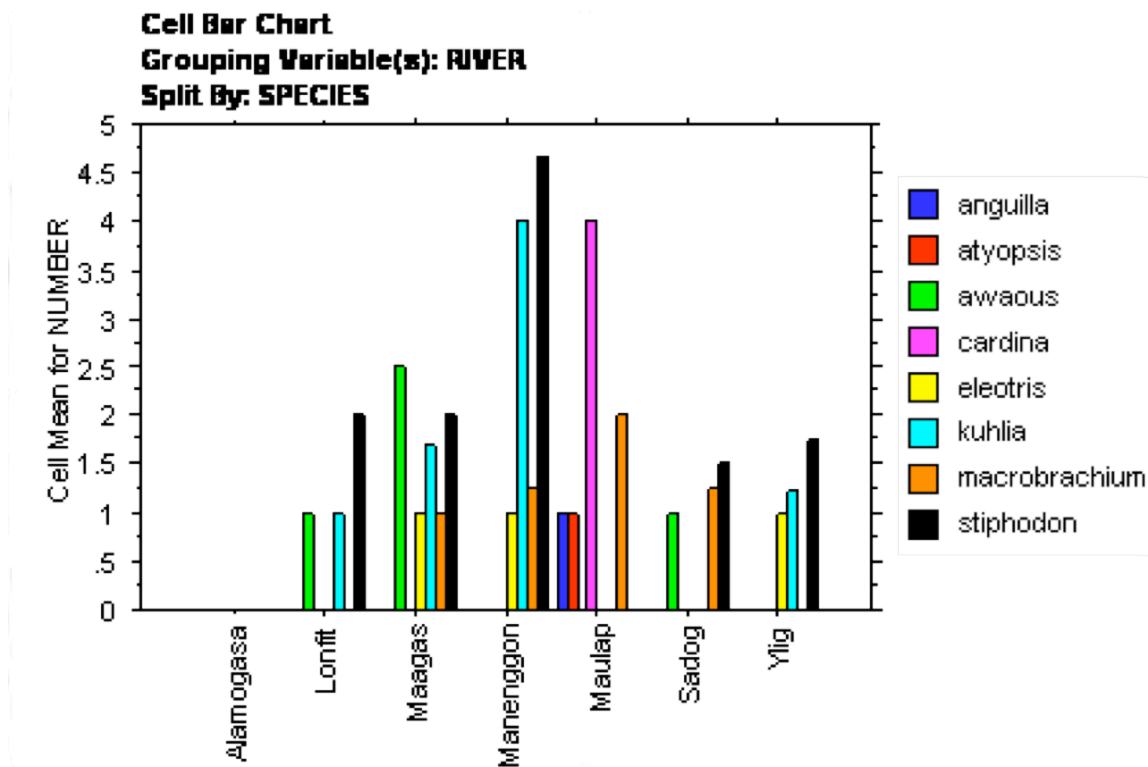
Source	Budgeted	Actual <u>or Estimated</u> <u>X</u>
Federal :	\$26,409	\$36,732
State		
Other:		
Total Federal	\$26,409	\$36,732
Total match	-0-	-0-
Total project:	\$26,409	\$36,732

5. Objectives:

To survey seven rivers in three watersheds on Guam (including one that contains a dam), over a one year period, to obtain information on fish species density and composition for analysis and comparison between watersheds.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.



Surveys were conducted to determine the effect a dam has on tropical river fauna. In order to determine species composition, organism density, and habitat characteristics, visual surveys and physical data collections were conducted in randomly chosen quadrats, in both experimental (impacted by the dam) and control (not affected by the dam) streams. The experimental streams (leading into the reservoir) are the Maulap, Alamogosa, and Sadog. The control streams (unaffected by a dam) are the Ylig, Maagas, Manenggon, and Lonfit. Data was entered into a spreadsheet so statistical analyses can be performed to compare data between experimental and control sites. Preliminary data from FY 06 is shown below.

Higher numbers of native fish were seen in the control rivers. Higher numbers of shrimp were seen in one of the experimental rivers (Maulap). This could be due to the exclusion of the shrimp's natural predator, Kuhlia. Stiphodon was the most numerous native fish. They were observed in every control river, but only one experimental river. They were also seen at lower numbers in the experimental river than any of the controls. Kuhlia, the top native freshwater predator, were not seen in any experimental river. This is due to the fact they are unable to ascend barriers over about 6 feet in height. Kuhlia are also not found above waterfalls in control rivers.

GDAWR heightened public awareness of native freshwater species to increase public interest in maintaining healthy freshwater ecosystems. Distributing flyers and posters of

the freshwater fauna of Guam to various schools and civic groups as well as conducting presentations to groups of school children about the freshwater fauna of Guam accomplished heightened awareness.

Several rivers in which the freshwater fauna was unknown were surveyed, and the data collected and entered into a database. The goal of this survey is to produce a comprehensive inventory of Guam's freshwater biological resources, and to provide a baseline for future environmental work in the rivers.

The report provides a brief summary of the freshwater fishery projects for Guam in FY 06. A more thorough report will be completed by the Division of Aquatic and Wildlife Resources.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

9. List any publications or in-house reports resulting from this work. None

Name, title, phone number, and e-mail address of person compiling this report:

This report was prepared by R. Brent Tibbatts. Fisheries Biologist I, (671) 735-3987, Brent.Tibbatts@gmail.com.

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1-R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 2. Management of Guam's Freshwater Fisheries Resources. Job 2. Fisheries Studies in Fena Lake.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Entire Island of Guam

4. Costs:

Source	Budgeted	Actual or Estimated X
Federal : _____	\$3,195.00	\$269.50
State		
Other: _____		

Total Federal	\$3,195.00	\$269.50
Total match		
Total project:	\$3,195.00	\$269.50

5. Objectives:

To monitor the freshwater fishery resource in Fena Lake by conducting a stock assessment using mark and recapture and electrofishing to obtain information on fish species composition and population structure.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables. Objectives were

not met, primarily because the Navy would did not allow access to Naval Magazine. No work could be conducted to meet expectations.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. None

9. List any publications or in-house reports resulting from this work. None

Name, title, phone number, and e-mail address of person compiling this report: This report was prepared by R. Brent Tibbatts. Fisheries Biologist I, Telephone number (671) 735-3987. E-mail- Brent.Tibbatts@gmail.com

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1-R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 2. Management of Guam's Freshwater Fisheries.
Job 3. Masso Reservoir Fisheries Monitoring.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Masso Reservoir

4. Costs:

Source	Budgeted	Actual <u>or Estimated</u> <u>X</u>
Federal : F1R	\$3,195.00	\$461.36
State		
Other:		
Total Federal	\$3,195.00	\$461.36
Total match		
Total project:	\$3,195.00	\$461.36

5. Objectives:

To monitor the freshwater fishery resource in Masso Reservoir by conducting mark-recapture studies on a yearly basis to collect biological information on the freshwater fisheries resource.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met.

Monitoring was not completed during FY06 because GDAWR did not have title to the

land containing Masso Reservoir. Title to the land was deeded to the Department of Agriculture in June 2006. The monitoring of the reservoir will be placed on hold until the reservoir is developed into a freshwater fishing facility. The process to obtain the necessary permits to start the project was initiated.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. None

Name, title, phone number, and e-mail address of person compiling this report: This report was prepared by R. Brent Tibbatts. Fisheries Biologist I, (671) 735-3987, Brent.Tibbatts@gmail.com.

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 3. Technical Assistance. Job 1. Technical Assistance to Activities Affecting Guam's Fisheries Resources

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Islandwide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$143,327	\$16,973.43
State		
Other:		
Total Federal	\$143,327	\$16,973.43
Total match		
Total project:	\$143,327	\$16,973.43

5. Objectives:

To provide technical information and increase public awareness on sport fishing and related issues to the public, the private sector, and local and federal government agencies on the island of Guam, as needed each year, through written comments and attendance at meetings.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

During FY06, the Fisheries Section reviewed 49 project proposals, including: developmental plans, environmental assessments, environmental impact statements, and permit applications. Fisheries Staff attended 150 meetings and made 40 field inspections to review these proposals. Fisheries personnel maintained good working relationships with the Department of Land Management, Department of Parks and Recreation, Guam Bureau of Statistics and Plans, Guam Environmental Protection Agency, Guam Hotel & Restaurant Association, Guam Visitor's Bureau, University of Guam, U.S. Army Corps of Engineers (ACOE), National Park Service, U.S. Fish and Wildlife Service, Western Pacific Regional Fisheries Management Council, National Marine Fisheries Service, Natural Resources Conservation Service, U.S. Navy, U.S. Coast Guard, and U.S. Air Force regarding matters of environmental concern.

Various Fisheries staff actively served as members of the following groups: Western Pacific Regional Pelagic Plan Monitoring Team, Western Pacific Regional Bottomfish Plan Monitoring Team, Western Pacific Regional Coral Reef Ecosystem Plan Monitoring Team, Guam Coral Reef Initiative Advisory Group, Mitigation Working Group, Marine Preserve Eco-permitting Working Group, Guam Seashore Reserve Working Group, and international fishery organizations such as the Secretariat of the Pacific and FAO.

The Fisheries Section also provided the following technical assistance in FY 06:

1. Technical support to the Division's Agricultural Development Services (ADS), which represents the Department and the Division on the Application Review Committee (ARC), to review applications for rezoning, variances, and various types of development as they pertain to fisheries concerns.
2. Information to the Western Pacific Regional Fisheries Management Council (WESPAC) and the Plan Monitoring Team (PMT) on projects for bottomfish, pelagic fisheries and coral reefs. Staff attended 5 off-island, Council-related meetings.
3. Represented the Department for input into the Coast Guard's sampling regiment for PCB contamination at Cocos Island and at a town meeting at the Municipality of Merizo to hear the resident's concerns. The source of PCB were transformers buried at Cocos Island after WWII by the Coast Guard at their former listening station.
4. Provided recommendations to the Guam Seashore Reserve Plan, which would help protect Guam's resources from various developmental activities.

5. Responses to requests for information on bills and laws and regulations pertaining to fish, endangered species, fishing and importation of fish.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 4. Biological Surveys. Job 1. Visual Stock Assessment Surveys of Marine Preserves and Control Sites

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Achang Reef Flat Marine Preserve, Piti Bomb Holes Marine Preserve, Tumon Bay Marine Preserve, Asan Bay, Pago Bay, Cocos Lagoon, backside of Cocos Lagoon, and East Agana Bay

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal : Sport Fish Restoration	\$ 159,949.00	\$2,078.23
State		
Other: _____		

Total Federal	\$ 159,949.00	\$2,078.23
Total match		
Total project:	\$ 159,949.00	\$2,078.23

5. Objectives:

- a. To evaluate the effect on sport fish populations caused by the creation of five marine preserves where fishing is restricted or prohibited by conducting fish counts and timed-swim counts on 40 permanent transects located in reef flat and lagoon habitats in Achang Reef Flat Marine Preserve, Piti Bomb Holes Marine Preserve, Tumon Bay Preserve, Asan Bay, Pago Bay, and Cocos Lagoon, every two years.

- b. To evaluate the effect on sport fish populations caused by the creation of five marine preserves where fishing is restricted or prohibited by conducting fish counts, timed-swim counts, and video-transects/quadrants on 40 permanent transects located at the 20', 30', 40', and 50' depth contours of the fore reef slopes in Achang Reef Flat Marine Preserve, Piti Bomb Holes Marine Preserve, Tumon Bay Preserve, Asan Bay, and the backside of Cocos Lagoon, every two years.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

During this reporting period, the Guam Division of Aquatic and Wildlife Resources (GDAWR) did not have the biological staff to continue the biological assessment. Currently, the Fisheries Section has two staff biologist that have their respective job duties, with one taking on the administrative duties assigned to the fishery supervisor and the other conducting freshwater work while filling in as needed. The fishery supervisor has been assigned as the GDAWR Acting Assistant Chief position, and the Air Force National Guard has assigned the only other staff biologist to active duty status. Therefore, fish counts, timed-swim counts, and video-transects/quadrants were not conducted. GDAWR has made attempts to obtain a current list of applicants in order to fill vacancies in the fisheries section.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

Division of Aquatic and Wildlife Resources. 2004. Biological Surveys: Visual Stock Assessment Surveys of Marine Preserves and Control Sites. Guam, Department of Agriculture.

Division of Aquatic and Wildlife Resources. 2003. Two Year Marine Preserve Report. Guam, Department of Agriculture.

Porter, V., Leberer, T., Gawel, M., Burdick, D., Gutierrez, J., Torres, V., and Lujan, E. 2005. “The State of the Coral Reef Ecosystems of Guam” in *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2005*. NOAA Technical Memorandum NOS NCCOS 11. NOAA/NCCOS Center for Coastal Monitoring and Assessment’s Biogeography Team. Silver Spring, MD. 522pp.

Porter, V., Leberer, T., Gawel, M., Burdick, D., Gutierrez, J., Torres, V., and Lujan, E. 2005. *Status of the Coral Reef Ecosystems of Guam* University of Guam Press, Mangilao. Technical Report 113. 80pp.

Abraham, T., Beger, M., Burdick, D., Cochrane, E., Craig, P., Fenner, D., Golbuu, Y., Gutierrez, J., Hasurmai, M., Houk, P., Idip, D., Jacobson, D., Joseph, E., Keju, T., Kelty, R., Kuartei, J., Leberer, T., Palik, S., Penland, L., Pinca, S., Porter, V., Rikim, K., Starmer, J., Trianni, M., Victor, S., Whaylen, L. 2004. "The Status of the Coral Reefs in Micronesia" in *Status of Coral Reefs of the World: 2004*, Clive Wilkinson ed. Australian Institute of Marine Science, Townsville, Australia.

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 5. Management of Guam's Coral Reef Fishery Habitat. Job 1. Quantifying and Assessing the Effects of Sedimentation on Fish Abundance, Fish Diversity, and Benthic Habitats including corals

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Piti, Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated X
Federal : _____	\$33,782	-0-
State _____		
Other: _____		

Total Federal	\$33,782	-0-
Total match		
Total project:	\$33,782	-0-

5. Objectives:

- a. To obtain a purchase order to obtain supplies and equipment needed for the project by December 2005.
- b. To assess Piti Bomb Holes Preserve and Fouha Bay, areas with current and future erosion control projects, and two appropriate control sites for detailed monitoring by December 2005.

- c. To conduct fish counts, timed-swim counts, and video-transects on 24 permanent transects located in the 20', 30', 40', and 50' depths of the fore reef slopes and reef flats of Piti Bomb Holes Preserve, Fouha Bay, and two control sites over a one year period.
- d. To install and monitor thirty sediment traps on a monthly basis each year during the study at Piti Bomb Holes Preserve, Fouha Bay, and two control sites in order to quantify sediment load at impacted sites.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This project is part of the Masso Restoration Project. The project includes restoring Masso Reservoir to a freshwater fishing facility, which involves dredging the reservoir to remove sediments, reforesting the Masso watershed area to prevent erosion/sedimentation, and purchasing lands around Masso Valley as conservation areas. The role of this project is to monitor the effects of erosion/sedimentation into the Masso and Taguag Rivers. One goal of the restoration project is to decrease the amount of sediment input into the rivers to eventually enhance coral reef habitats.

7. Describe how the objectives were met. See "Supplemental Information" for additional requirements and "Attachments" for specialized tables.

During this reporting period, the objectives of the project were not met. The coral reef monitoring assistant at GDAWR was to lead the project. However, the monitoring assistant resigned because the National Oceanic and Atmospheric Administration (NOAA) hired the assistant in December 2005. The assistant continues to be housed at GDAWR but their responsibilities have changed. Because of staff shortages, GDAWR thought of alternative options to complete the project. During FY 2006, GDAWR revised the objectives to contract out the project instead of GDAWR conducting the project. GDAWR removed Fouha Bay as one of the study sites and will concentrate on the Piti Bomb Holes Preserve. Furthermore, GDAWR obtained cost estimates from the University of Guam Marine Laboratory (UOGML) and the Water and Energy Resource Institute (WERI) to contract the work to them. During FY2007, GDAWR will work with UOGML and WERI on contracting the project to them.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Due to staff shortages, the objectives were not met. Limited personnel were needed for existing projects, such as the creel surveys. For this reason, an alternative option of contracting the project out was decided upon. GDAWR expects to remedy the staff shortages in the next fiscal year. GDAWR has made several requests from the

Department of Administration (DOA) to send a list of applicants for the Fisheries Biologist positions. A staffing shortage at DOA may be the reason on the difficulty in obtaining a list of viable candidates.

9. List any publications or in-house reports resulting from this work.

N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 5. Management of Guam's Coral Reef Fishery Habitat. Job 2. Analyzing and Assessing Recreational Impacts on Coral Reef Habitat and Determining a Carrying Capacity within Marine Preserves

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Tumon Bay and Piti Bay, Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u> </u> or Estimated <u>X</u>
Federal : _____	\$65,870	\$480.21
State _____		
Other: _____		

Total Federal	\$65,870	\$480.21
Total match		
Total project:	\$65,870	\$480.21

5. Objectives:

- a. Develop a scope of work and request for proposal by December 2005.
- b. To obtain a contract by June 2006 to assess the impacts of recreation activities within Tumon Bay and Piti Bomb Holes Marine Preserves on coral reef habitat by linking recreational activities to their effects on the abundance, diversity, and distribution of fishes, corals, macro-invertebrates, and marine plants as well as substrate cover, water clarity, temperature, dissolved oxygen, pH and damage or pollution related to recreational activities and comparing the effects to appropriate control sites.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

During this reporting period, a portion of objective 1 was completed while objective 2 was not completed. GDAWR began developing a scope of work for the project, and is currently working on completing it. GDAWR contacted individuals from on-island, such as the University of Guam Marine Laboratory (UOGML), to potentially work on the project. GDAWR learned that there are no individuals from on-island who are capable of conducting this type of assessment. GDAWR did find a company off-island who has experience in conducting this type of work. GDAWR will be meeting with a representative from the company in Fiscal Year 2007 to discuss the project.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

N/A

9. List any publications or in-house reports resulting from this work.

N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 6. Guam Sports Fish Aquatic Education. Job 1: Printing and distribution of Fisheries posters, brochures, and educational outreach items

2. Report Period: October 1, 2005 to September 30, 2006.

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Island wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$25,223	\$9,360.00
State		
Other:		
Total Federal	\$25,223	\$9,360.00
Total match		
Total project:	\$25,223	\$9,360.00

5. Objectives:

- a. Obtain a purchase order to print 5000 (ea) of the multi-lingual scientific pelagic and food fish posters by December 2005 and distribute to the public to increase communication amongst the different language speakers.
- b. Obtain a purchase order to print 2500 (ea) of the freshwater posters by December 2005 and distribute to the public to increase communication and knowledge of Guam's freshwater resources.
- c. Obtain a purchase order to print 2500 (ea) of the marine preserve posters and brochures by January 2006 and distribute to the public to increase communication and knowledge of Guam's marine preserves.

- d. Obtain a purchase order to print up to 1000 (ea) of “Help Save Guam’s Reefs” on pencils, pens, stickers, pins, badges, and hats by December 2005 and distribute to the public as incentives at presentations, lectures, and events to increase communication and knowledge of Guam’s marine resources. GDAWR will also have a question and answer session, and those individuals who answer a question correctly will receive the outreach items.
- e. Digitize poster and brochure files for future use.
- f. Distribute other fisheries posters as they become available to further the knowledge pertaining to aquatic resources of Guam.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives were met by the following activities during FY06: 1) Distribution of 5,000 color posters on the reef and pelagic fishes of Guam, 2) The development and production of six thousand (6,000) copies of a 2007 wall fish calendar, 3) Digital files for fish posters were located and archived at and GDAWR, and 4) The freshwater poster project is at the film transparency stage, and awaits cost pricing for graphics artwork, and drum scanning before being print.

The Sport Fish Restoration Program funded the development and production of the posters. Four thousand fish posters were reprinted for 2006 distribution. The fish posters were made available to the public, especially to fishermen during inshore and offshore surveys.

The calendars featured twelve (12) reef fish found in Guam’s Marine Preserves, and tidal charts. These calendars were distributed to fishermen during inshore and offshore surveys, the public upon request at the main office, village mayors, Senators, Science teachers, marine preserve stakeholders, Guam fisherman’s Co-op, and other interested members of the public upon request at the Division’s office.

Several of the other objectives were not met this fiscal year because of time constraints. They included: 1) marine preserve posters and brochures were not completed during this fiscal year because of time constraints, 2) the ordering of fisheries related conservation items for public distribution at lectures, presentations and other venues, were not completed in this fiscal, and 3) although freshwater fish artwork was recorded on film, the posters were not produced.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 6. Guam Sports Fish Aquatic Education. Job 2: Produce posters and brochures illustrating: land events as they affect Guam's Coastal waters, reef and fisheries; life cycle of five common reef fishes; and reef fish functional group.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Island wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal : Sport Fish Restoration	\$6,086.00	\$5,655.98
State		
Other: _____		

Total Federal	\$6,086.00	\$5,655.98
Total match		
Total project:	\$6,086.00	\$5,655.98

5. Objectives:

- a. During the first year, research and develop the concept of the erosion-reef and reef fish life cycle poster, and functional group brochure based on input from various agencies and groups. Assemble and archive poster and brochure elements and develop text, line-art and photographs.
- b. During the second year, contract and work with artist to develop the poster and brochure, design layout, and then identify a printer to print the poster and brochures.

- c. Upon completion of printing, the posters and brochures will be distributed to the public.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The first year’s objective was met during FY06 by the following activities: information was collected for the various projects that would provide the most useful and timely information to the sports fishing community and photographs were taken of reef-fish in consultation with fisheries biologist.

The poster will be produced upon development of the concept and production during the following fiscal year (FY07).

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

Thomas P. Flores, Jr., Acting Fishery Supervisor, (671) 735-4033,
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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 6. Guam Sports Fish Aquatic Education. Job 3: Maintenance and expansion of Aquatic education website

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Island wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$19,911.00	\$4,364.47
State		
Other: _____		

Total Federal	\$19,911.00	\$4,364.47
Total match		
Total project:	\$19,911.00	\$4,364.47

5. Objectives:

- a. Contract webmaster services to maintain the software programming of the Aquatics website.
- b. Resource Education and Information Officer (REIO) provides content maintenance: Post available aquatic education materials, project reports, photos, etc.
- c. Disseminate new information in a timely manner.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives were met during FY06 as the Webmaster services were contracted for the fiscal year making the Division’s website (www.guamdawr.org) available to the public for their information. The website provided aquatic educational materials, project reports, photos, etc., as they were available.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 6. Guam Sports Fish. Job 4: Create and expand a digital library of fish and marine habitat photos

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006[extended to March 31, 2007]

3. Location of work: Guam: Island wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal : Sport Fish Restoration	\$16,011.00	\$13,992.94
State		
Other: _____		

Total Federal	\$16,011.00	\$13,992.94
Total match		
Total project:	\$16,011.00	\$13,992.94

5. Objectives

- a. Solve the lack of quality images, by assessing the state of the library of aquatic related photos, and assemble a list of species, habitats, and subject matter needed to replaced and photographed.
- b. Photograph the images needed in the assessment, digitally photographing fish and marine habitat to solve Aquatics' current lack of quality images of reef fishes and coral habitats.
- c. Update photographs on the Fisheries section poster board and have them printed.

- d. Archive the images as JPEG files on Gold/archival compact disks to assure retention of the quality of the images.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives of this project were met by the following activities during FY06:

1. Because of the tropical environment, typhoons, and earthquakes, nearly all the stored film images suffered from humidity, heat, fungus and mold damage. A comprehensive project of in-water photography was begun to replace these images.
2. More than 80 hours of underwater time was spent photographing in-shore and reef fish.
3. New, digital fish images were used to create a marine preserve calendar with integrated tide charts, lunar phases, and detailed information regarding the marine preserves.
4. All information and images were backed-up on an external hard drive. The information was then archived to Gold/Archival compact disks in triplicate and stored off-site.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-1R-14

Grant name: Guam Sport Fish Investigations

Project number and name: Project 6. Guam Sports Fish Aquatic Education. Job 5. Public Presentations of Aquatic Resources.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006[extended to March 31, 2007]

3. Location of work: Guam: Island wide

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$67,902.00	7,488.77
State		
Other: _____		

Total Federal	\$67,902.00	7,488.77
Total match	-0-	-0-
Total project:	\$67,902.00	7,488.77

5. Objectives:

To increase understanding of the importance of reefs, the knowledge of fish and other marine life, Guam's marine preserves, and awareness of watersheds, and the erosive damaging effects of grassland fires by presentations to various groups, events, and schools.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives were met by the following activities during FY06:

a) The Division of Aquatic and Wildlife Resources (DAWR) delivered a total of seventy-nine (79) presentations on endangered species, coral reef ecology (esp. toxic marine sea creatures) and fish to: public and private elementary, middle schools and high schools; University of Guam (UOG) classes; four different summer camps; Guam Community College (GCC) police trainees; and the Department of Defense Education Activity (DODEA) High, elementary, middle, and high schools.

b) Aquatic presentations were observed and critiqued by the Resource, Education and Information officer for: preparation; adequate use of teaching aids; and delivery style.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-6-B-5

Grant name: Guam Sport Fish Investigations

Project number and name: Maintenance and Repair of Ramps and Piers

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Hagatna Boat Basin, Merizo Pier and Boat Ramp

4. Costs:

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : _____	\$453,419	\$8,253.62
State _____		
Other: _____		

Total Federal	\$453,419	\$8,253.62
Total match		
Total project:	\$453,419	\$8,253.62

5. Objectives:

- a. Establish a Memorandum of Understanding (MOU) with the Port Authority of Guam and the Department of Parks and Recreation for the maintenance and repair of the Merizo Ramp and Pier and Agana Boat Basin for boaters and recreational fishermen by December 2005.
- b. Begin work to repair the Agana Boat Basin's pilings by January 2006 after the Memorandum of Understanding with the Port Authority of Guam is completed. The contract for the project is in place already.
- c. Have a contract in place to repair the Merizo Ramp and Pier's bumpers, pilings, and damaged concrete structures on the ramps, piers, and walkways by March 2006.

- d. Have a contract in place to waterblast the ramps at the Merizo Ramp and Pier and Agana Boat Basin by December 2005.
- e. Contract work to replace part of the decking at the Agana Boat Basin by March 2006.
- f. Contract the work to replace the four (4) existing solar lights on the Merizo pier and the two (2) lights at the foot of the boat ramp by December 2005. The Department of Agriculture shall be responsible for the cost of the lighting.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives of the grant were not met during FY06. A Memorandum of Understanding (MOU) between GDAWR and the Port Authority of Guam (PAG) to conduct work at the Agana Boat Basin and the Agat Marina, and another MOU between GDAWR and the Department of Parks and Recreation (DPR) to continue work at the Merizo boat ramp and possibly repair and maintain the small public pier at the Cocos Island pier were still being developed during the fiscal year.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Three primary hurdles encountered during this process were the time it took to obtaining both GDAWR and Federal Assistance approval for corrections/additions:

- Federal Assistance’s decision to consider a cost-sharing approach regarding recreational and commercial activities with PAG to conduct work at the Agana Boat Basin and Agat Marina during the middle of FY06. Initially, any work at these two marinas was deemed ineligible because of commercial activity. Guam’s two major dilemmas with funding any work at public marinas is the presence of commercial operations, although not all commercial boaters utilize the walkways and pilings and at least three of the heaviest used boat ramps are located at these marinas.
- The review time required by the Port Authority of Guam and the Department of Parks and Recreation before obtaining official signatures for the MOUs. Producing an initial working document to the satisfaction of GDAWR, Federal Aid, PAG, and DPR took an enormous amount of time because of numerous corrections and drafts being worked on simultaneously. In addition, approval from PAG and DPR were not often timely.

- And redrafting the MOU's with the cost-sharing approach with prior approval from all agencies involved before an official copy is circulated for formal signatures.

At the end of FY06, a final discussion between Federal Assistance (Honolulu) and GDAWR occurred, with both representatives agreeing on the MOUs, which then need the Regional Federal Aid's approval before the local approval process begins. The Port Authority of Guam and the Department of Parks and Recreation reiterated that the revised MOU should meet their department's approval. It is now expected that approval from the regional Federal Aid office should occur in early FY07. Then, approval on the local government's side may also take a significant amount of time since the three Departments, the Attorney General's office, and the Governor's approval need to be obtained. The two MOU's would then make available boating access funds that have not been used the past two fiscal years.

9. List any publications or in-house reports resulting from this work.

Name, title, phone number, and e-mail address of person compiling this report: This report was prepared by Thomas Flores, Jr., Acting Fisheries Supervisor, (671) 735-4033, thomasfloresjr@yahoo.com.

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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-8-D-4 Amendment #2

Grant name: Guam Sport Fish Investigations

Project number and name: Maintenance and Repair of Fishing Platforms and Renovation of Office Space and Storage Facility

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Ylig and Togcha Bay for fishing platforms, and Mangilao for renovation of office space and storage facility

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$208,786	\$41,829
State		
Other: _____		

Total Federal	208,786	\$41,829
Total match		
Total project:	208,786	\$41,829

5. Objectives:

- a. To maintain and repair the 5 fishing platforms located on the reef flats of Talofofo, Ylig, and Togcha Bays, over a one-year period. Maintenance will include removal of accumulated trash in the vicinity of the platforms. The type of repair will depend on the type of damage encountered and will be provided as needed.
- b. To renovate and maintain the division's existing office space in order to provide more efficient use of limited space for fisheries work-stations, complete

renovations of storage facility, and purchase office generator and and supplies. Partitions, bookcases, and cubicle style desks, shelves, and file cabinets will be purchased.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

GDAWR visited the existing Togcha and Ylig platform sites approximately 4 times in FY 06 to remove trash and fishing line entangled within the platform. The owner of Jeff’s Pirate Cove, a business establishment located near the Togcha platforms, assisted GDAWR by having their staff remove trash from the platforms, usually on a daily basis. The owner also reminded fishermen who were using the fishing platforms to properly dispose of their trash.

During the beginning of FY06, the vendor who was awarded the office furniture contract (partitions, desks, bookcases, shelves, and filing cabinets) for the professional staff delivered and installed the furniture in the Fisheries Section. Also, the vendor that received the purchase order for three air conditioner units delivered and installed the units within the Fisheries Section.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

Division of Aquatic and Wildlife Resources. 2005. Maintenance and Repair of Fishing Platforms and Renovation of Office Space and Storage Facility. Guam Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report
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Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: F-9-D-5

Grant name: Guam Sport Fish Investigations

Project number and name: Maintenance and Redeployment of DAWR FADs and SWMs

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam: Islandwide

4. Costs:

Source	Budgeted	Actual <u> </u> or Estimated <u> X </u>
Federal : _____	\$92,609.00	\$64,369.46
State _____		
Other: _____		

Total Federal	\$92,609.00	\$64,369.46
Total match		
Total project:	\$92,609.00	\$64,369.46

5. Objectives:

- a. To maintain, preserve, and replace the 14 fish aggregating devices located between 3.5 and 12 miles off the island of Guam, in a one-year period.
- b. To maintain, preserve, and replace the 34 shallow water mooring buoys located in 30-40 ft. of water off the coast of Guam, in a one-year period.
- c. To study the feasibility of establishing new shallow water mooring buoys within Tumon Bay Marine Preserve, Piti Bomb Holes Marine Preserve, and Achang Reef flat Preserve in a one year period.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The Guam Division of Aquatic and Wildlife Resources (GDAWR) is currently responsible for the maintenance and redeployment of 14 Fish Aggregating Devices (FAD) sites and 34 Shallow Water Moorings (SWM) sites located on the northern and leeward sides of Guam. Although GDAWR is responsible for all aspects of the FADs program, GDAWR established an agreement with the Guam Marine Awareness Foundation (GMAF) during FY 2005 to reinstall offline SWMs with components that would be obtained from GDAWR.

During FY 2006, the coordinator for the FADs and SWMs project was activated for duty with the Air National Guard at the beginning of FY 2006, and remained in activated status for most of the fiscal year. There is a high probability that the coordinator for this project may be on active military duty until May 2007. As a result, purchase orders to obtain FAD and SWM materials, the contract to deploy FADs, and the purchase order to conduct aerial surveys during FY06 were not all completed. Because of this, no deployments occurred during FY06. However, a third of the FAD systems remain online.

In summary, the objectives were not met during FY06 because of staffing problems. However, a senior biologist has been assigned to assist with two technicians to achieve the project's objectives. Initial paperwork for the project objectives were, unfortunately, not completed. Now that the problem with the program has been identified, completion of necessary paperwork, ordering of supplies, and amending the grant to include possibly adding additional FADS with input from the fishing community should be completed during FY07.

8. Discuss differences between work anticipated in grant proposal and grant agreement and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

a. Absence of the FAD/SWM coordinator resulted in the deployment and aerial contracts not being completed. A lack of biological oversight from other biologists and technical staff concentrating on other projects made it difficult at the end of the fiscal year to determine FAD and SWM inventory. The Acting Fisheries supervisor has been tasked to ensure that the initial contract and ordering of supplies is completed before tasking the technical staff to oversee the project. In addition, a tracking system of gear issued to GMAF will be completed.

b. The FAD rope systems have always arrived in a box with the both ends exposed and the remaining rope arranged in a slender Figure 8 fashion. Newer systems come in spools with only one end exposed. It may be necessary to add an additional item in the usual Scope of Work for that the contractor to first remove the rope systems from the spool and attach both ends to the anchor and buoy before loading the entire system onto their boat prior to deployment because the attachment process requires welding, and welding at sea may increase the risk of an accident.

An alternative option is to include specifications to have the supplier pack the rope with both ends exposed.

c. Inventory of FAD/SWM components, SWM Installation Program

Two Fisheries Technicians were recently detailed to inventory the available gear for FAD deployment, and a total of seven FAD systems are available:

- (1) 500 fathom system with rope system in box arrangement,
- (1) 500 fathom system with the rope system in box arrangement with approximately 200 feet of rope cut. This system can still be used but will result in a smaller surface water scoping action.
- (2) 500 fathom systems with rope system in a spool arrangement,
- (1) 750 fathom system with rope system in a box arrangement, and,
- (2) 1,000 fathom systems with rope system in a box arrangement.

The company supplying the rope systems had always sent the rope system in a box arrangement that exposed both ends, making it easier for the deployment contractor to connect the ends to the buoy and the concrete anchor. Because new systems come in an unexpected spool arrangement, with only one of the ends exposed, the cost may increase. The spooled rope may have to be undone to initially connect both ends to the anchor and buoy prior to loading the systems on a boat. This is a safer process compared to connecting the newly exposed rope end to the anchor portion during FAD deployment at sea.

An alternative option is to include specifications to have the supplier pack the rope with both ends exposed.

GMAF continues to install GDAWR SWMs free of charge. At least three (3) SWM components were given to GMAF; however the project coordinator may have given additional SWM components. It has been difficult contacting the GMAF liaison for a complete list of components given for installation, but this should be completed during FY07.

9. List any publications or in-house reports resulting from this work.

Please refer to the GDAWR Website at (<http—www.guamdawr.org>) and Fisheries section annual reports (2005)

Name, title, phone number, and e-mail address of person compiling this report:

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3980, jaytgutierrez@yahoo.com

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-10-D-1

Grant name: Guam Sport Fish Investigations

Project number and name: Construction of Rinse-Off Facility and Installation of Electrical System in the Fisheries Warehouse

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam, Mangilao

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : Sport Fish Restoration	\$124,536	\$101,700
State		
Other: _____		

Total Federal	\$124,536	\$101,700
Total match		
Total project:	\$124,536	\$101,700

5. Objectives:

- a. To construct a rinse-off facility within a one-year period to store, wash, and secure field equipment.
- b. To rewire the electrical system in the Division's existing storage facility within a one-year period to provide for a climate-controlled mezzanine for storage of archival materials.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

During FY 2005, the Guam Division of Aquatic and Wildlife Resources (GDAWR) drafted plans and specifications for the construction of the rinse-off facility. GDAWR sent a work request for the construction of the facility and rewiring the electrical system to the Department of Public Works (DPW) in November 2004. Subsequently, DPW staff worked with GDAWR on finalizing the plans and specifications for the bid process. An invitation for bid was announced and advertised in July 2005, and DPW and respective bidders visited the proposed rinse-off area at the Department. Sealed bids were opened in early August 2005, and the project was awarded to the lowest bidder. A contract was drafted, and GDAWR is waiting signatures from the Bureau of Budget and Management Research (BBMR), the Guam Attorney General’s Office, and the Governor of Guam’s Office. GDAWR can proceed with the project once all parties sign the contract.

During FY06, the contract was completed and signed by the Governor of Guam. In addition, the contractor has been bonded and is currently waiting for the DPW to issue the Notice to Proceed (NTP). It is expected that the NTP will be issued in early FY07 and the project completed during FY07. The contractor has conducted site visits at the Department regarding the project.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. N/A

Name, title, phone number, and e-mail address of person compiling this report:

Jamie Bass, Fisheries Technician II, (671) 735-3958, jddsbase@gmail.com and Thomas Flores, Jr., Acting Fishery Supervisor, (671) 73504933, thomasfloresjr@yahoo.com

Annual Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: F-11-D-1 Amendment #1

Grant name: Guam Sport Fish Investigations

Project number and name: Masso Reservoir Restoration

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Masso Reservoir

4. Costs:

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal :	\$381,043	\$376.12
State		
Other:		
Total Federal	\$381,043	\$376.12
Total match		
Total project:	\$381,043	\$376.12

5. Objectives:

- a. Establish a Memorandum of Understanding (MOU) with the Ancestral Lands Commission by December 2005.
- b. Have a contract in place to conduct a wetland delineation study by March 2006.
- c. Obtain permits and approvals from the U.S. Army Corps of Engineers and the Guam Environmental Protection Agency, which is dependent on the wetland delineation study, by June 2006.
- d. The grant will be amended when the permits are obtained.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met.

While GDAWR was waiting for a response from the Ancestral Land Commission (who had title to the property) on the Memorandum of Understanding (MOU), GDAWR discussed with the Director of Agriculture the option of deeding title of the Masso Reservoir to the Department. The Director consulted with the Governor's Office, and Governor Felix Camacho deeded title of Masso Reservoir to the Department of Agriculture in June 2006 through Executive Order 2006-14 to be used as a freshwater fishing facility and conservation area.

GDAWR did not complete objectives two and three because activity could not start until the title or an MOU was obtained.. Now that GDAWR has title to the land, the process to obtain the necessary permits and conduct a wetland delineation study can move forward. GDAWR sent out a request to obtain quotes for a wetland delineation study at the end of FY 06 and is currently waiting for responses.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work. None

Name, title, phone number, and e-mail address of person compiling this report:

R. Brent Tibbatts. Fisheries Biologist I, Telephone number (671) 735-3987. E-mail-
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Jay T. Gutierrez, Acting Assistant Chief, (671) 735-3980, jaytgutierrez@yahoo.com

WILDLIFE RESTORATION
FY 2006
W-1-R-14

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Subproject, Study No., and Job Number and Name: Subproject A: Management of Guam's populations of Birds and Mammals, Study No.: W-1 Game and Non-game Birds, Job 1: Survey and Inventory of Resident and Migrant Birds of Guam and Rota.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Andersen Air Force Base

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal :	\$86,100	\$107,661.41
State		
Other: _____		

Total Federal	\$86,100	\$107,661.41
Total match		
Total project:	\$86,100	\$107,661.41

5. Objectives: (list project objectives from grant proposal or grant agreement)

- a. To determine population trends, distribution and breeding status of the Mariana crow by conducting monthly searches for birds in northern Guam.
- b. To determine population trends, distribution and breeding status of the Guam swiftlet by conducting quarterly cave counts of birds entering and exiting active caves, the Mahlac, Maemong, and Fachi caves and surveying these caves for nesting birds.
- c. To determine population trends of other game (black francolin) and non-game birds (yellow bittern, blue-breasted quail, Micronesian starling, Eurasian tree sparrow, white

- tern, brown noddy, and migrant species) by conducting annual roadside surveys throughout the island.
- d. To determine population trends and distribution of Guam rails on the island of Rota in areas where they occur including the Saguagaga, I Chiugai, and Gampapa, by conducting playbacks surveys along transects and roadways.
 - e. Record and confirm all noteworthy sightings of migrant bird species.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Monthly searches for Mariana crow were conducted in the Munitions Storage Area 1 (MSA 1), Ritidian Point, Tarague Basin, and Pati Point. Searches were conducted using playbacks and hiking through known territories. Of the ten crows that remain in the wild in northern Guam, eight crows were monitored intensely.

Four population surveys Mariana gray swiftlets at Mahlac cave were conducted in FY06. The results are: December, 665 birds; March, 640 birds; May, 570 birds; and September, 767 birds. US Navy Environmental biologists conducted surveys at Maemong and Fachi caves.

The annual Spring Bird Count occurred in May 2006. Twenty-five routes were surveyed throughout the island covering 232 stations, including Naval Magazine. The Naval Magazine route has not been surveyed in the previous years due to the events of September 11, 2001. Results: black francolin (n=923) was the most abundant species followed by the Eurasian tree sparrow (n=545). The Micronesian starling, a native to Guam, was poorly represented in the Andersen housing route (n=8) compared to FY05 (n=41). Interestingly, a reef heron was observed during the Cocos Island survey route and three brown boobies at the Tarague Beach survey route.

During June and July 2006, playbacks of rail vocalizations were broadcast at 255 points in areas listed in the objectives above. Points were spaced at 100m intervals along roads and trails in areas that were rails were likely to occur. Four different playback sequences lasting one minute each were broadcast during 15 minutes at each point. These areas were selected because releases occurred there between August 2000 and December 2005. Rails were detected at 12 points.

Noteworthy sightings of migratory bird species for FY06 included three barn swallows at Tarague Beach Basin, a Chinese goshawk in the Munitions Storage Area, a flock of 20 tattlers at Inarajan, and numerous sightings of wedge-tail shearwaters at the southeastern coast of Guam (Pago Bay to Cocos Island).

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Survey and Inventory of Resident and Migrant Birds of Guam, Fiscal Year 2006, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Paul Wenninger, Biologist II, Guam Rail Recovery Program, 671-735-3994,
pwenninger@yahoo.com

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Subproject, Study No., and Job Number and Name: Subproject A: Management of Guam's Populations of Birds and Mammals, Study No.: W-2 Native Mammals, Job 1: Population Biology of Mariana Fruit Bats in the Mariana Islands.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Andersen Air Force Base

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual <u> </u> or Estimated <u> X </u>
Federal :	\$3,500	\$2345.96
State		
Other: _____		

Total Federal	\$3,500	\$2345.96
Total match		
Total project:	\$3,500	\$2345.96

5. Objectives: (list project objectives from grant proposal or grant agreement)

Determine population trends and age-structure of fruit bats on Guam by conducting monthly counts of known roost sites including the Andersen Air Force Base roost.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See "Supplemental Information" for additional

requirements and “Attachments” for specialized tables.

The objective was met with monthly bat population surveys (12 counts) at the Pati Point colony from October 2005 to September 2006. With the minimum count in August and the maximum count in April and May, the number of adult bats ranged from 24-40 individuals. No large-scale movements of bats were noted this year.

Pups were present in four monthly counts (February, April, May, and July) over the year, ranging from one to two pups present. One pup was observed during the May and July counts. In February, a large pup was observed in the colony.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Population biology of Marianas Fruit Bats in the Mariana Islands, Fiscal Year 2006, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Jeffrey S. Quitugua, Wildlife Biologist, 671-735-3956/96, jeff_quitugua73@yahoo.com

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Subproject, Study, and Job Number and Name: Subproject A: Management of Guam's populations of Birds and Mammals, Study No. W-3: Introduced Mammal Investigation, Job 1. Population Biology of Deer and Feral Asiatic Water Buffalo.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual or Estimated <u>X</u>
Federal :	\$18,500	\$7780.52
State		
Other: _____		

Total Federal	\$18,500	\$7780.52
Total match		
Total project:	\$18,500	\$7780.52

5. Objectives: (list project objectives from grant proposal or grant agreement)

- a. Determine deer abundance by conducting monthly spotlight counts at Pati Point, Munitions Storage Area (MSA) and Northwest Field on Andersen Air Force Base (AAFB).
- b. Determine feral carabao abundance in conjunction with the monthly counts on NOA.
- c. Document note worthy sightings of deer and feral carabao.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Northern deer population surveys were conducted in Andersen Air Force Base (AAFB) utilizing survey routes at Pati Point, Northwest Field (NWF) and Munitions Storage Area (MSA). The three survey routes are hunting areas in AAFB though MSA and parts of Pati Point that are restricted to bow hunting. In addition, AAFB's Volunteer Conservation Program conducts nightly depredation hunts in Pati, NWF and MSA. Depredation in MSA is restricted to bow hunting.

Method for deer surveys involves two staff members: a driver and an observer. The observer identifies deer along the 12.87 km (8 miles) survey route determining age class (fawn, yearling, doe or buck). For bucks, the number of tines is noted.

MSA surveys were not conducted on January and June because of military exercises. Population surveys were conducted from October 2005 to September 2006 for the Pati Point and NWF survey routes. The mean average number of deer per kilometer at each survey route is: Pati Point 4.5, NWF 2.5, and MSA 8.2.

Monthly counts for feral carabao in the Naval Magazine were not conducted during fiscal year 2006.

Noteworthy sightings of deer are as follows: 672 deer were observed in areas including AAFB, Guam National Wildlife Refuge (GNWR), and Naval Magazine. One hundred and fifty-two deer was noted at GNWR, 256 deer in MSA, 100 deer between Pati Point to Andersen golf course, 144 deer at Tarague basin, and 20 deer at Naval Magazine.

No sightings of feral carabao were recorded in fiscal year 2006.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Carabao counts were not conducted because of denied access by the US Navy.

9. List any publications or in-house reports resulting from this work.

GDAWR, Population Biology of Deer and Feral Asiatic Water Buffalo, Fiscal Year 2006, Guam Division of Aquatic and Wildlife Resources' Annual Reports, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Jeffrey S. Quitugua, Wildlife Biologist , 671-735-3956/96, jeff_quitugua73@yahoo.com

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Subproject, Study, and Job Number and Name: Subproject A: Management of Guam's populations of Birds and Mammals, Study No. W-4: Monitoring Harvest of Game Mammals and Birds, Job 1: Harvest of deer, feral pigs, feral carabao and black francolin.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal :	\$10,000	\$3403.04
State		
Other:		
Total Federal	\$10,000	\$3403.04
Total match		
Total project:	\$10,000	\$3403.04

5. Objectives: (list project objectives from grant proposal or grant agreement)

1. Determine the hunter harvest of deer, feral pigs, and black francolin by analyzing mandatory hunter questionnaires and hunter logs from Andersen Air Force Base.
2. Determine the impact game animals by tabulating depredation permit take of deer, feral pigs, feral carabao and black francolin based on monthly Depredation Reports, which are required of all permittees for the duration of their permit.

6. If the work in this grant was part of a larger undertaking with other components

and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Sixty-nine hunter questionnaires were received and tallied for FY06 (hunter questionnaires are still pending at the time of this report). Hunting season for deer is 1 October-31 March with a bag limit of 3 deer, either sex. Hunting season for feral pigs is year round with no bag limit. Results from the hunter questionnaires showed 29 deer and 36 feral pigs harvested in Government of Guam and private lands this fiscal year. No harvest of black francolins was reported.

Andersen Air Force Base hunting logs indicated 404 deer and 85 feral pigs harvested this fiscal year. Hunting in AAFB was year round with no bag limits. Harvesting of black francolins on AAFB is not permitted.

Thirty-six depredation permits were issued in FY 2006. Depredation permit holders are required to submit monthly reports to gDAWR indicating species and numbers harvested. Permit holders from the general public harvested a total of 123 pigs (78 males, 45 females) and 43 deer (31-males, 12 females). Andersen Air Force Base was given the authorization by Department of Agriculture to conduct depredation hunt in Andersen property. A total of 581 deer (236 males, 334 females, and 11 unknown) and 40 feral pigs (21 males, 15 females, 4 unknown) were removed from AAFB.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Harvest of Deer, Feral Pigs, Feral Carabao, and Black Francolin, Fiscal Year 2006, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Guam Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Jeffrey S. Quitugua, Biologist I, 671-735-3996, jeff_quitugua73@yahoo.com

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Subproject, Study, Job and Number and Name: Subproject B: Natural History and Ecology of Guam's Vertebrates, Study No. W-1: Threatened and Endangered Species Investigations, Job 2: Natural History of Endangered Birds.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual or Estimated <u>X</u>
Federal :	\$74,300	\$6,290.10
State		
Other: _____		

Total Federal	\$74,300	\$6,290.10
Total match		
Total project:	\$74,300	\$6,290.10

5. Objectives: (list project objectives from grant proposal or grant agreement)

- a. To determine nesting success, home range, habitat requirements and activity patterns of Mariana crows in northern Guam in the Andersen air force Base Area, and on Rota.
- b. To determine the nesting success and activity patterns of the Guam (Mariana gray) swiftlet at the Mahlac, Fachi, and Maamong caves.
- c. To determine estimated number of pairs, clutches and size, nesting success and activity patterns of Guam rails in Area 50 and on Rota.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

During the breeding season, crow searches are conducted in territories of established breeding pairs on Guam. Five nests belonging to two pairs were found this breeding season. Data collected include nest attendance, egg turns, chick and/or mate feeding, and other behaviors.

Two nests found contained single eggs that were harvested and artificially incubated at GDAWR. Dummy eggs were placed in the nests, however they were abandoned. Two pairs had active nests in which a single chick hatched in each nest. One chick was found dead under the nest after it had fallen. The second chick was parent reared and fledged in March. The family is routinely monitored.

Four population surveys of swiftlets were conducted in December, March, May and September. During all four surveys, reproduction was documented with observations of adults carrying nesting material, incubating eggs and brooding chicks. Maemong and Fachi caves were surveyed by the US Navy.

Detection of Guam rail pairs and family groups were conducted using population surveys as well as during activities such as cat control and radio tracking. Family groups were detected at two points during the July survey in Duge, Rota.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Natural History of Endangered Birds, Fiscal Year 2006, Guam’s Division of Aquatic and Wildlife Resources’ Annual Report, Guam Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Jeffrey S. Quitugua, Biologist I, 671-735-3996, jeff_quitugua73@yahoo.com
Paul Wenninger, Biologist II, 671-734-3994, pwenninger@yahoo.com

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Project number and Name: **Project:** Technical Assistance to Activities Affecting Guam's Wildlife Resources, Study No. W-1: Technical Assistance, Job 1: Technical Assistance

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual or Estimated <u>X</u>
Federal :	\$18,000	\$8592.70
State		
Other: _____		

Total Federal	\$18,000	\$8592.70
Total match		
Total project:	\$18,000	\$8592.70

5. Objectives: (list project objectives from grant proposal or grant agreement)

- a. To minimize the adverse impacts resulting from the construction of recreational, commercial, military, and public facilities. Report on the number of projects reviewed and provide information on the amount of habitat preserved, mitigations implemented, etc.
- b. Participate in emergency responses to salvage wildlife and to participate in emergency exercises that involve responding to accidental oil and toxic substance spills on wildlife.
- c. To ensure that development and utilization of Guam's coastal and interior areas does not

result in the deterioration of the environment.

- d. To pursue the possibility of establishing safe-harbor, habitat conservation plan agreements with private and other non-federal landowners to encourage the protection and enhancement of land conducive to native wildlife.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

GDAWR reviewed and provided technical assistance for eight major construction projects and many smaller projects impacting wildlife on Guam. Major projects were located on Andersen Air Force Base (AAFB), COMNAVMAR, and Apra Harbor. The Air Force plans to expand personnel, training, and infrastructure and will seriously impact natural resources on Guam. GDAWR has worked closely with Mr. Jonathan Wald, Natural Resource Planner for AAFB, through informal and formal meetings to mitigate impacts to resources.

In addition, GDAWR reviewed several plans by Government of Guam (Department of Public Works – Highway Division, Bureau of Statistics and Plans, and Guam Environmental Protection Agency) and Federal Government (USFWS and ACOE), that would affect natural resources on publicly owned lands. No mitigation plans have been formulated for these projects and negotiations are on-going.

In conjunction with Guam’s Homeland Security, GDAWR staff participated in the training of Preparedness and Response to agricultural terrorism on a management level.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Of the four objectives, only objective four did not take place this fiscal year. The development of Safe Harbor Agreements with Cocos Island Resort was initialized at the beginning this fiscal year and not charged to PR funds.

9. List any publications or in-house reports resulting from this work.

GDAWR, Technical Assistance Fiscal Year 2006, Guam’s Division of Aquatic and Wildlife Resources’ Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Diane Vice, Wildlife Biologist III, 671-735-3990, dianevice@gmail.com

Annual Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: W-1R-14

Grant name: Guam Wildlife Restoration

Project number and Name: Project: Coordination of Guam's Wildlife Programs, Study No. W-1: Coordination, Job 1: Coordination

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual or Estimated <u>X</u>
Federal :	\$97,500	\$17806.73
State		
Other: _____		

Total Federal	\$97,500	\$17806.73
Total match		
Total project:	\$97,500	\$17806.73

5. Objectives: (list project objectives from grant proposal or grant agreement)

- a. To plan, coordinate, supervise, and administer all wildlife restoration programs including programs in wildlife population monitoring, implementing of management plans, and ensuring legislation that affect Guam's wildlife are in alignment with other regulations.
- b. Install an emergency generator for GDAWR Administrative Office and Wildlife Office.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The Wildlife Supervisor is currently Acting Chief of the Division of Aquatic and Wildlife Resources. Throughout FY06 there were three biologists that rotated through the position in an acting capacity to ensure the smooth operation of wildlife restoration programs.

The installation of the emergency generator has not been completed. Funds to cost-share the generator were identified and projects were amended. W-1R-14 has been extended for one fiscal year for the sole purpose of completing this objective.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Coordination, Fiscal Year 2006, Guam’s Division of Aquatic and Wildlife Resources’ Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Diane Vice, Wildlife Biologist III, 671-735-3990, dianevice@gmail.com

STATE WILDLIFE GRANTS
FY 02 Funding
T-1-D

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-1-D

Grant name: Guam State Wildlife Grant Program

Project number and name: Subproject W-1: Emergency Power Generation for Incubation Facility

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are “Actual” or “Estimated”

Source	Budgeted	Actual <u>or Estimated</u> <u>X</u>
Federal :	\$50,000	\$55,758
State		
Other:		
Total Federal:	\$50,000	\$55,758
Total match		
Total project:	\$50,000	\$55,758

5. Objectives:

To install a diesel generator to provide reliable emergency back up power to the GDAWR Incubation Facility by the end of FY04.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The installation of the generator was completed this fiscal year. The project is lacking the underground connection to hook up the generator to the public power source.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in DAWR’s annual report for FY06.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3985, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-1-D

Grant name: Guam State Wildlife Grant Program

Project number and name: Subproject W-2: Construction of Micronesian Kingfisher Breeding Facility

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are “Actual” or “Estimated”

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal :	\$144,000	\$124,000
State		
Other:		
Total Federal:	\$144,000	\$124,000
Total match		
Total project:	\$144,000	\$124,000

5. Objectives:

1. To construct a Micronesian Kingfisher facility, including 6-holding and 2-breeding pens, and a perimeter fence by FY04.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

The larger activity is to captive breed Guam Micronesian kingfishers in captivity to

prevent the extinction of the species and to eventually reintroduce them back to Guam. Endangered Species Section 6 fund the majority of the species recovery in captivity on Guam. Also, there are 11 zoological facilities participating in the Micronesian Kingfisher Species Survival Plan. Each institution funds the husbandry efforts of maintaining and reproducing kingfishers at their respective facilities. The role of this project is to construct the first holding and breeding aviaries for kingfishers on Guam.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

From this grant, two Micronesian kingfisher facilities have been constructed. The main facility, containing five holding and two breeding pens, was completed in FY05. The second facility contains ten holding pens (or five breeding pens) and was completed in FY06. Remaining funds from this project will be used in FY07 to construct additional catch cages to the enclosures in the main facility.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in DAWR’s annual report for FY06.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3985, medinas@guam.net

**STATE WILDLIFE GRANTS
FY 03 Funding
T-2-D**

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-2-D

Grant name: Guam State Wildlife Grant Program

Project number and name: Subproject W-1: Emergency Power Generation for DAWR Administrative Office and Wildlife Office

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are “Actual” or “Estimated”

Source	Budgeted	Actual <u>X</u> or Estimated <u> </u>
Federal :	\$25,000	\$0
State		
Other:		
Total Federal:	\$25,000	\$0
Total match		
Total project:	\$25,000	\$0

5. Objectives:

Install a diesel generator to provide reliable emergency back-up power to the GDAWR Administrative and Wildlife Offices.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

There are several grants which are funding the installation of the emergency generator for

the GDAWR Administrative and Wildlife Office: Wildlife Restoration, Sport Fish Restoration, Guam Fish and Wildlife Coordination, and this State Wildlife Grant.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objective was not met in this fiscal year. The grant has been extended into FY07 for completion.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The only work that was performed on this project was with grant modification. The GDAWR Administrative Office is now included in this project, therefore, cost-sharing between the grants were made. The grant was modified and approved reducing the project obligation from \$70,000 to \$25,000.

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in GDAWR’s annual report for FY06.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3985, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-2-D

Grant name: Guam State Wildlife Grant Program

Project number and name: Subproject W-2: Construction of Guam Rail Outdoor Holding Cages

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are “Actual” or “Estimated”

Source	Budgeted	Actual <u>X</u> or Estimated <u> </u>
Federal :	\$75,181	\$22,000
State		
Other:		
Total Federal:	\$75,181	\$22,000
Total match		
Total project:	\$75,181	\$22,000

5. Objectives:

Replace Guam rail wooden holding cages with permanent steel framed holding cages at GDAWR.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

The larger activity is the captive breeding of Guam rails to prevent the species extinction.

Funding for this is from Endangered Species Section 6. There are also 17 zoological facilities participating in the Guam Rail Species Survival Plan. Each facility funds the housing and breeding of Guam rails at their respective institutions.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Two steel framed holding pens were constructed in FY05. However, an additional \$45,000 was added to the grant project in FY06. The grant has been extended to allow for the construction of these cages to take place in FY07.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in DAWR’s annual report for FY06 (in prep).

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3985, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-2-D

Grant name: State Wildlife Grant Program

Project number and name: Subproject W-3. Development of a Comprehensive Wildlife Conservation Strategy

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are “Actual” or “Estimated”

Source	Budgeted	Actual or Estimated <u>X</u>
Federal:	\$44,000	\$859.88
State		
Other: _____		

Total Federal	\$44,000	\$859.88
Total match		
Total project:	\$44,000	\$859.88

5. Objectives: (list project objectives from grant proposal or grant agreement)

To develop a Comprehensive Strategy by the end of FY 2005.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

On March 2006, GDAWR received a “conditional” approval of the strategy. The strategy needed to contain additional information on the relative condition of habitat that are important to species of greatest conservation need (SOGCN), such as grasslands, open fields, strand forest, and shoreline habitats. GDAWR was given 6 months to revise the strategy to include the habitats important to SOGCN and its relative condition in paragraph or tabular form.

GDAWR resubmitted Guam’s Comprehensive Wildlife Conservation Strategy on November 6, 2006 for National Advisory Acceptance Team (NAAT) review.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in GDAWR’s annual report for FY06 (in prep) and on the web at www.guamdawr.org.

Name, title, phone number, and e-mail address of person compiling this report:

Jeffrey S. Quitugua, Wildlife Biologist I, 671-735-3996, jeff_quitugua73@yahoo.com

**STATE WILDLIFE GRANTS
FY 04 Funding
T-3-R**

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-3-R

Grant name: State Wildlife Grant

Project number and name: Subproject: W-1: Reestablishing Island Swiftlets to Former Swiftlet Caves

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal :	\$50,000	\$0
State:		
Other:		
Total Federal:	\$50,000	\$0
Total match:	0	
Total project:	\$50,000	\$0

5. Objectives:

- a. In FY06, establish an MOU between GDAWR and Andersen Air Force Base committing Tarague Cave as the site for swiftlet translocation.
- b. Prepare Tarague Cave for swiftlet translocation by removing 200 brown tree snakes from the cave and surrounding area using snake traps and/or acetaminophen bait stations. Continue to suppress snake densities after swiftlets have been established in cave.
- c. Capture 5% of the swiftlet population or no more than 25 birds from Mahlac Cave and release at Tarague Cave. Swiftlets are documented as reproducing year-

round, however translocation will take place during the off-peak breeding season (September-December).

- d. Determine the need for subsequent release of birds to the Tarague Cave after a yearly analysis of site fidelity after the first release.
- e. Determine the feasibility of conducting releases to other suitable caves by the end of FY07.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

Currently the Guam swiftlet population, located within the Naval Ordnance, is being protected from brown treesnake predation under a Naval contract with US Department of Agriculture, Wildlife Services. The Guam Division of Aquatic and Wildlife Resources monitors the swiftlet population, in cooperation with Navy biologists. Monitoring provides necessary information on the status of the source population for translocation.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

None of the objectives were met in FY06.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Due to lack of staff within GDAWR, the project was on hold. A biologist II was hired as of October 2006 to begin work on the project in FY07.

9. List any publications or in-house reports resulting from this work.

The result of this project will be available in GDAWR's annual report for FY06 (in prep).

Name, title, phone number, and e-mail address of person compiling this report:

Diane Vice, Wildlife Biologist III, 671-735-3990, dianevice@gmail.com

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-3-R

Grant name: State Wildlife Grant

Project number and Name: Subproject: W-2: Survey of the Terrestrial Gastropods of the Northern Limestone Plateau in Guam

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal :	\$30,003	\$30,003
State:		
Other:		
Total Federal:	\$30,003	\$30,003
Total match:		
Total project:	\$30,003	\$30,003

5. Objectives:

- a. In FY06, establish an MOU between GDAWR and the University of Guam.
- b. Establish 48 sampling stations on the northern plateau of Guam.
- c. Assess the distribution and status of snail populations on the northern limestone plateau of Guam.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant is part one in a two-part series to complete a survey of gastropods on Guam. The survey of southern Guam is funded within the T-5 grant apportionment.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

In FY06, an MOU between GDAWR and the University of Guam was established. The University of Guam (UOG) principle investigator completed a satellite image analysis to identify the 48 study sites in northern Guam. The protocol was modified to include replication to produce a stronger report. The original plan was for each sampling site to contain one five meter-square plot with five sub-samples; the improved protocol includes two five meter-square plots with four sub-samples.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The contracted work may have been completed within FY06 if the contracting procedures occurred in a timely manner to allow an earlier start date for the project.

9. List any publications or in-house reports resulting from this work.

A final report will be forwarded to GDAWR upon completion of project and UOG will publish the results.

Name, title, phone number, and e-mail address of person compiling this report:

Diane Vice, Wildlife Biologist III, 671-735-3990, dianevice@gmail.com

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-3-R

Grant name: Guam State Wildlife Grant Program

Project number and name: Subproject W-3: Implementation of Comprehensive Wildlife Conservation Strategy

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are “Actual” or “Estimated”

Source	Budgeted	Actual or Estimated
Federal :	\$44,997	\$10,357.95
State		
Other:		
Total Federal	\$44,997	\$10,357.95
Total match		
Total project:	\$44,997	\$10,357.95

5. Objectives: (list project objectives from grant proposal or grant agreement)

- a. Coordinate with research groups and other cooperators to develop projects for obtaining baseline information on biology, distribution, and abundance of species of special concern, including their habitat.
- b. Develop Third Party Agreements with cooperators and assist in developing grant and/or project proposals for implementation with State Wildlife Grant funds.
- c. Create a Guam Comprehensive Wildlife Conservation Strategy Committee and

convene regularly scheduled meetings.

- d. Administer Guam's State Wildlife Grant Program.

6. If the work in this grant was part of a larger undertaking with other components and funding, present brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See "Supplemental Information" for additional requirements and "Attachments" for specialized tables.

The objectives of the project were partially met in FY06. Funds were used for GDAWR staff to participate in the Pacific Invasive Learning Network (PILN) meeting in Palau in May 2006. The information gained and shared in this meeting was related to species of greatest concern and their recovery on Guam.

The Guam Comprehensive Wildlife Conservation Strategy (GCWCS) document was revised [and resubmitted November 2006] to the U. S. Fish and Wildlife Service, Region 1 for the National Advisory Acceptance Team to review.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The committee for the Guam CWCS has not been formed as of date.

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in GDAWR's annual report for FY06 (in prep).

Name, title, phone number, and e-mail address of person compiling this report:

Jeffrey S. Quitugua, Wildlife Biologist, 671-735-3956/96, jeff_quitugua73@yahoo.com

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-3-R

Grant name: Guam State Wildlife Grant Program

Project number and name: Subproject W-4: Reproductive Behavior and Parental Care by Captive Guam Micronesian Kingfishers

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal :	\$15,004	\$0
State		
Other:		
Total Federal:	\$15,004	\$0
Total match		
Total project:	\$15,004	\$0

5. Objectives:

Determine the components related to parental care of Guam Micronesian kingfisher nestlings or chicks.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

The larger activity is to captive breed Guam Micronesian kingfishers in captivity to

prevent the extinction of the species and to eventually reintroduce them back to Guam. Endangered Species Section 6 fund the majority of the species recovery in captivity on Guam. Also, there are 11 zoological facilities participating in the Micronesian Kingfisher Species Survival Plan. Each institution funds the husbandry efforts of maintaining and reproducing kingfishers at their respective facilities.

The Guam Micronesian kingfishers have extremely low reproductive success and a majority of chicks raised are hand-reared. This project will allow GDAWR staff to study the birds in a more natural environment on Guam, as opposed to an artificial zoo setting, to better understand why 66% of chicks disappear from the nest and how to prevent this from happening on both Guam and the US mainland.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

No objectives were met during FY06.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

This project objective was not met in FY06 because of lack of breeding females on Guam. The one adult female at GDAWR's captive breeding facility died in October after successfully fledging one chick. GDAWR is currently waiting the arrival of two females from the Smithsonian's Conservation Research Center.

9. List any publications or in-house reports resulting from this work.

The results of this project will be available in GDAWR's annual report for FY06.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3985, medinas@guam.net

STATE WILDLIFE GRANTS
FY 05 Funding
T-4-M

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-4-M

Grant name: State Wildlife Grant

Project number and name: Subproject W-1: Mariana Fruit Bat Colony Snake Control

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal :	\$110,000	\$0
State:		
Other: _____		

Total Federal:	\$110,000	\$0
Total match:		
Total project:	\$110,000	\$0

5. Objectives:

To increase fruit bat pup survivorship within the Pati Point Mariana fruit bat colony by at least one pup during FY 2006 by contracting USDA Wildlife Services to remove 500 brown treesnakes from the area surrounding the Pati Point colony.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See "Supplemental Information" for additional requirements and "Attachments" for specialized tables.

The objective of snake trapping around the colony was not met.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Snake trapping has not commenced around the colony yet and is expected to commence in 2007. Memorandum of Understanding (MOU) is being processed, as the work will be conducted by U. S. Department of Agriculture, Wildlife Services.

9. List any publications or in-house reports resulting from this work.

The result of this project will be available in GDAWR's annual report for FY06 (in prep).

Name, title, phone number, and e-mail address of person compiling this report:

Diane Vice, Wildlife Biologist III, 671-735-3990, dianevice@gmail.com

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-4-M

Grant name: State Wildlife Grant

Project number and name: Subproject W-2: Implementation of Guam's Comprehensive Wildlife Conservation Strategy

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal :	\$20,221	\$0
State:		
Other: _____		

Total Federal:	\$20,221	\$0
Total match:		
Total project:	\$20,221	\$0

5. Objectives:

- a. Coordinate with research groups and other cooperators to develop projects for obtaining baseline information on biology, distribution, and abundance of species of special concern, including their habitats, during FY2007.
- b. Develop Third Party Agreements with cooperators and assist in developing grant and/or project proposals for implementation with State Wildlife grant funds.
- c. Continue to coordinate a Guam Comprehensive Wildlife Conservation Strategy Committee and convene regularly scheduled meetings.

d. Administer Guam's State Wildlife Grant Programs.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See "Supplemental Information" for additional requirements and "Attachments" for specialized tables.

The objectives for this project will be implemented in FY07.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

The result of this project will be available in DAWR's annual report for FY06 (in prep).

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-735-3985, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: T-4-M

Grant name: State Wildlife Grant

Project number and name: Subproject W-3: Renovation of DAWR Wildlife Lab

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>X</u> or Estimated
Federal :	\$25,000	\$0
State:		
Other: _____		

Total Federal:	\$25,000	\$0
Total match:		
Total project:	\$25,000	\$0

5. Objectives:

- a. Increase the number of rooms within the Wildlife Lab from three to six by building walls that will divide the current space into specialized rooms designated for specific aviculture activities.
- b. Replace current counter top and add at least 20 square feet of countertop space to increase the workspace for incubators, animal intensive care units, diet preparation, etc.
- c. Increase food storage capacity by purchasing a walk-in cooler refrigerator and storage cabinets.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

The objectives for this project will be implemented in FY07.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

The result of this project will be available in GDAWR’s annual report for FY06 (in prep).

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-735-3985, medinas@guam.net

**Endangered Species Section 6
FY 2004 Funding
(Grant Extended)
E-2-7**

Final Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture

1. State: Territory of Guam

Grant number: E-2-7

Grant name: Endangered Species Section 6

Project number and name: Guam Endangered Species Recovery

Subproject and job number and name: Subproject A: Reproductive Enhancement of the Mariana Crow and other Endangered Species, Job 2: Area-wide Brown Treesnake Control

2. Report Period: October 1, 2003 to September 30, 2005

Report due date: 31 December 2005

3. Location of work: Guam

4. Costs:

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$15,000	\$9,351.12	\$14,182.83	\$23,533.95
State :				
Other :				
Total Federal :	\$15,000	\$9,351.12	\$14,182.83	\$23,533.95
Total Match :				
Total Project:	\$15,000	\$9,351.12	\$14,182.83	\$23,533.95

5. Objectives:

To protect up to 10 active Mariana crow nests with electrical barriers and area-wide snake control.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this

project.

This project is part of a program devoted to establishing a breeding population on Guam of Mariana crows by increasing reproductive success in the wild. This project focuses in protecting active crow nests by electrical barriers attached to nest trees.

7. Describe how the objectives were met.

Four snake barriers were placed on five Mariana crow nest trees in FY04 (one nest tree was reused twice). The nest tree species were *Vitex sp.* and *Elaeocarpus joga*. One nest had three separate snake barriers installed because of the close proximity of two *Averrhoa bilimbi* trees. Release site and perimeter trapping continued around the release site in FY04. Although, the four trees fitted with barriers fell short of the objective of protecting 10 nests, the number barriers protected was limited by the number of active nesting pairs (two). A total of 36 snakes were caught in grid and perimeter traps surrounding the release site.

This grant was extended for the following year, FY05. During this fiscal year, funds from the extended grant were used to purchase a field vehicle. The vehicle is used to fulfill the objective of protecting Mariana crow nests with snake barriers and snake control traps by transporting staff and equipment to the nests sites.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The grant objective of protecting 10 Mariana crow nests with electrical barrier and area-wide snake control was not met as there were only two nesting pairs of Mariana crows.

9. List any publications or in-house reports resulting from this work.

GDAWR, Area-wide Brown Treesnake Control, Fiscal Year 2003, Guam's Division of Aquatic and Wildlife Resources Annual Report, Department of Agriculture.

Aguon, D.F, W. Campbell, III, and J.M. Morton. 2002. Efficacy of electrical barriers used to protect Mariana crow nests. Wildlife Society Bulletin 30:703-708.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Biologist III, 671-735-3957, medinas@guam.net

Final Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture

1. State: Territory of Guam

Grant number: E-2-7

Grant name: Endangered Species Section 6

Project number and name: Guam Endangered Species Recovery

Subproject and job number and name: Subproject A: Reproductive Enhancement of the Mariana Crow and other Endangered Species, Job 3: Translocation of Mariana Crows

2. Report Period: October 1, 2003 to September 30, 2005

Report due date: December 31, 2005

3. Location of work: Guam and Rota

4. Costs:

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$85,000	\$40,686.36	\$19,182.83	\$59,869.19
State :				
Other :				
Total Federal :	\$85,000	\$40,686.36	\$19,182.83	\$59,869.19
Total Match :				
Total Project:	\$85,000	\$40,686.36	\$19,182.83	\$59,869.12

5. Objectives:

- a. Translocate up to 18 Mariana crow eggs or chicks from Rota to Guam for hand-rearing and then release into the wild the following year in the Munitions Storage Area (MSA), Andersen Air Force Base, to reestablish a self-sustaining Mariana crow population on Guam.

- b. Band and collect blood samples from all chicks and hatchlings produced on Guam; tag and instrument all birds for release with radio transmitters.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This project is part of a program devoted to establishing a breeding population on Guam of Mariana crows by increasing reproductive success in the wild. This project focuses in translocating crow eggs and chicks.

7. Describe how the objectives were met.

From October to December 2003, GDAWR personnel spent 766.84 hours on Rota searching and locating pairs for possible harvest and translocation of eggs and/or chicks to Guam. Several pairs were observed with juvenile crows within their territories but no nesting behavior was observed. In December, GDAWR harvested two eggs from the Lalayak pair. From February to April 2004, 358.22 hours were spent following up on the Lalayak pairs as well as all pairs identified.

In December 2003 on Guam, three eggs were pulled from MSA for aviculture intervention from the pair named Camacho and Umumu. One egg was not viable while the other two hatched. One chick remained at the GDAWR Wildlife Lab to be hand-reared and the other chick was returned to the nest at two days of age.

Four sub-adult crows at the Wildlife Lab were harnessed with transmitters, had blood collected, were banded, and released within MSA the previous fiscal year (September 2003). These birds were monitored daily for the first months of their release. The radios attached to two crows failed shortly after release. However, visuals have been made on all crows throughout the fiscal year. All crows remained within MSA.

This grant was extended for the following year, FY05. During this fiscal year, funds from the extended grant were used to purchase a field vehicle. The new vehicle was used to fulfill both Objectives of Subproject A, Job 3, by monitoring release birds translocated from Rota as well as for searching and monitoring nests on Guam.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Translocation of Mariana Crows, Fiscal Year 2003, Guam's Division of Aquatic and Wildlife Resources Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Biologist III, 671-735-3957, medinas@guam.net

Final Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture

1. State: Territory of Guam

Grant number: E-2-7

Grant name: Endangered Species Section 6

Project number and name: Guam Endangered Species Recovery

Subproject and job name and number: Subproject B: Avicultural Management for Rails, Kingfishers and Crows, Job 1: Captive Propagation of Guam Rails

2. Report Period: October 1, 2003 to September 30, 2005

Report due date: December 31, 2005

3. Location of work: Guam

4. Costs:

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$260,000	\$115,906.51	\$66,573.10	\$182,479.61
State :				
Other :				
Total Federal :	\$260,000	\$115,906.51	\$66,573.10	\$182,479.61
Total Match :				
Total Project:	\$260,000	\$115,906.51	\$66,573.10	\$182,479.61

5. Objectives:

- a. Increase the number of actively breeding pairs of Guam rails at the GDAWR facilities until a maximum of 22 pairs is reached.
- b. Produce at least five Guam rails from each pair of rails annually. (Full production potential of GDAWR will be an average of 110 rails annually.)
- c. Maintain a minimum of 80 individual Guam rails at mainland zoo facilities for

captive breeding.

- d. Build permanent steel-framed rail holding cages at GDAWR.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided all funding for endangered Guam rail captive propagation on Guam. Other funding was provided by 17 US zoological facilities participating in the Guam Rail Species Survival Plan. Each institution funded the husbandry efforts of maintaining and reproducing rails at their respective facility.

The overall goal of this effort is to increase the captive Guam rail population to supply Guam rails for release into the wild. As the majority of the captive population is located on Guam (78%), our institution reproduces over 95% of rails annually.

7. Describe how the objectives were met.

The number of banded Guam rails at the Division of Aquatic and Wildlife Resources' captive breeding facility increased from 104 rails on 1 October 2003 to 106 rails on 30 September 2004. Twenty breeding pairs produced 243 eggs, 147 of which hatched. Ninety-six chicks lived for at least 30 days of age, were banded and added to the captive population by the end of FY04. Ninety-one rails were transferred to Rota but only 90 were released in the wild (one was returned to DAWR due to a fractured jaw). A total of five deaths occurred at GDAWR. A shipment of four rails from the Smithsonian's Conservation Research center was expected in December 2003 but was canceled due to West Nile Virus. Suzanne Medina presented on the Guam Rail Recovery Program at the American Zoo and Aquarium annual conference in New Orleans in September 2004. Two steel-framed holding pens were constructed this fiscal year.

This grant was extended for the following year, FY05. During this fiscal year, funds from the extended grant were used to purchase a vehicle. This vehicle replaces the old vehicle and was used to transit staff to purchase grocery and hardware items, make veterinary visits, and haul large equipment to the captive breeding facility. Funds were also used to relocate the electrical feed at the Wildlife Lab and purchase a new computer. The new computer gave the Wildlife Lab the ability to perform genetic analysis of intended pairs without having to borrow a computer from a biologist in the Wildlife Office.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

We did not reach our anticipated goal of 22 breeding pairs as finding birds both genetically and behaviorally compatible is difficult. Only eight pairs out of the twenty

pairs produced more than five offspring – this was mostly due to aggressive behavior in the males.

9. List any publications or in-house reports resulting from this work.

GDAWR, Captive Propagation of Guam Rails, Fiscal Year 2003, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3957, medinas@guam.net

Final Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture

1. State: Territory of Guam

Grant number: E-2-7

Grant name: Endangered Species Section 6

Project number and name: Guam Endangered Species Recovery

Subproject and job number and name: Subproject B: Avicultural Support for Rails, Kingfishers and Crows, Job 2: Mariana Crow Aviculture Support

2. Report Period: 1 October 2003 to 30 September 2005

Report due date: 31 December 2005

3. Location of work: Guam and Rota

4. Costs:

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$52,000	\$22,973.71	\$22,816.91	\$45,790.62
State :				
Other :				
Total Federal :	\$52,000	\$22,973.71	\$22,816.91	\$45,790.62
Total Match :				
Total Project:	\$52,000	\$22,973.71	\$22,816.91	\$45,790.62

5. Objectives:

- a. From crows on Guam, produce at least one surviving nestling each year per pair through inducement of multiple clutches, including eggs, hand-rearing young, and releasing into the wild.
- b. From up to 18 crow eggs and/or chicks translocated from Rota to Guam annually, artificially incubate, hatch, hand-rear and release into the wild on Guam.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided all funding for all aviculture support for the endangered Mariana crow.

7. Describe how the objectives were met.

In the 2003/2004 breeding season, five Mariana crow eggs from two clutches (two eggs from Rota, three eggs from Guam) were pulled for artificial incubation and hand-rearing. Four of the five eggs hatched (one Guam egg was not viable) and of those four, three were target for hand-rearing. These three chicks, however, died within nine days of hand-rearing. Causes of death of all three chicks are unknown at this time as necropsy and pathology reports revealed nothing remarkable. Toxicity is suspected since all chicks exhibited excellent vitality and growth rates before displaying the same symptom (struggling to defecate) around day eight. The fourth chick, from the Guam clutch, was returned to the nest at two days of age. At 16 days, the chick fell from the nest and was subsequently hand-reared at the GDAWR Wildlife Lab.

Three eggs from one clutch were pulled on Guam in September 2004 at the start of the 2004/2005 breeding season. One egg was not viable as it showed no signs of development and the other two eggs were viable yet flawed with cracks and large toenail holes. When pulled, the weight loss was already too great and the eggs could not be saved.

Five juvenile crows from the 2002/2003 breeding season are housed at the Wildlife Lab and will be released on Guam in FY05. One juvenile from the 2003/2004 breeding season died in December 2003 of a secondary infection from a superficial wound. A non-releasable crow is held at the GDAWR facility and used as a mentor bird.

This grant was extended for the following year, FY05. During this fiscal year, funds were utilized to purchase a vehicle for transporting eggs from the field as well as monitoring released juveniles.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The work anticipated consisted of hand-rearing up to 18 chicks from Rota as well as chicks hatched from Guam pairs. However, due to the failures from the hand-rearing attempts, the expiration of the Rota translocation permit, and the poor quality of eggs, the only chick successfully hand-reared at the Wildlife Lab was the 16 day old chick which fell from the nest on Guam.

9. List any publications or in-house reports resulting from this work.

GDAWR, Mariana Crow Aviculture Support, Fiscal Year 2004, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3957, medinas@guam.net

Final Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture

1. State: Territory of Guam

Grant number: E-2-7

Grant name: Endangered Species Section 6

Project number and name: Guam Endangered Species Recovery

Subproject and job number and name: Subproject B: Avicultural Support for Rails, Kingfishers and Crows, Job 3: Captive Propagation of Guam Micronesian Kingfishers

2. Report Period: October 1, 2003 to September 30, 2005

Report due date: December 31, 2005

3. Location of work: Guam

4. Costs:

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$50,783	\$16,742.56	\$17,816.91	\$34,559.47
State :				
Other :	0	0	0	0
Total Federal :	\$50,783	\$16,742.56	\$17,816.91	\$34,559.47
Total Match :				
Total Project:	\$50,783	\$16,742.56	\$17,816.91	\$34,559.47

5. Objectives:

- a. Cross-train three GDAWR staff with successful mainland zoo kingfisher staff during the breeding months.
- b. Establish one pair of kingfishers at the Guam facility by FY 2003.
- c. Construct a Micronesian kingfisher facility in three phases: Phase 1: construct one breeding enclosure in the Guam Rail Captive Breeding Facility.

- d. Construct Micronesian breeding enclosure complete with holding cages, breeding cages and security fence (Phase II and III).

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided the funds to continue repatriating Micronesian kingfishers to Guam from US zoological facilities for reproduction. Other funding was provided by nine zoological facilities participating in the Micronesian Kingfisher Species Survival Plan (SSP). Each institution funds the husbandry efforts of maintaining and reproducing kingfishers at their respective facility.

Wildlife Conservation and Restoration Program and State Wildlife Grant money are funding construction of holding and captive breeding aviaries for kingfishers on Guam.

The overall goal of this effort is to increase the captive Micronesian kingfisher population to sufficient numbers to begin reintroductions in snake-controlled areas on Guam. Currently, the mainland zoological facilities are unable to accomplish this goal because of high chick and adult mortality. Efforts for GDAWR to become involved with the captive breeding program remains the highest priority on Guam and of the SSP as the Micronesian kingfisher will eventually become extinct in captivity on the mainland. It is speculated that the problems the zoo community are encountering are within their inability to completely replicate the natural diet and environment of the kingfisher.

7. Describe how the objectives were met.

Sixteen chicks fledged between 1 October 2003 and 30 September 2004, increasing the captive breeding population to 73 birds (this includes both mainland and Guam populations). Three deaths occurred this fiscal year, including one male from Guam. The Guam pair excavated nest cavities twice – the first attempt while they were housed in the Mariana crow facility, while the second attempt took place in the kingfisher breeding pen located in the Guam rail facility. Both attempts ended in aggression and the birds had to be separated.

Construction for the main kingfisher facility (Phase II) is underway. Upon completion in January 2005, arrangements will be made with the kingfisher SSP to send more kingfishers to Guam.

Wildlife Biologist III Suzanne Medina presented at the Micronesian kingfisher SSP meeting in New Orleans in September 2004.

This grant was extended for the following year, FY05. During this fiscal year, funds were used to purchase a vehicle which was used for hunting geckos for feeding the kingfishers.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Three of the four objectives were completed: establishing one breeding pair on Guam, the completion of the first breeding enclosure in the Guam rail facility, construction of Phase II of the kingfisher facility. One objective was not completed: cross-training of GDAWR staff with mainland kingfisher staff – this was not carried out due to the late arrival of the kingfisher pair to Guam, therefore not giving sufficient time in the breeding season to allow cross-training.

9. List any publications or in-house reports resulting from this work.

GDAWR, Captive Propagation of Guam Micronesian Kingfishers, Fiscal Year 2004, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-734-5019, medinas@guam.net

Final Project Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture

1. State: Territory of Guam

Grant number: E-2-7

Grant name: Endangered Species Section 6

Project number and name: Guam Endangered Species Recovery

Subproject and job name and number: Subproject C: Development of an Experimental Population of Guam Rails on Rota or Other Suitable Islands, Job 1: Establishment of Experimental Population of Guam Rails on Rota and other Suitable Islands

2. Report Period: October 1, 2003 to September 30, 2005

Report due date: December 31, 2005

3. Location of work: Guam and Rota

4. Costs:

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$20,000	\$33,018.61	\$29,093.30	\$62,111.91
State :	0	0	0	0
Other :				
Total Federal :	\$20,000	\$33,018.61	\$29,093.30	\$62,111.91
Total Match :				
Total Project:	\$20,000	\$33,018.61	\$29,093.30	\$62,111.91

5. Objectives:

Continue program to establish an experimental population of Guam rails in northeastern Rota with releases of up to 100 Guam rails using captive-bred birds from Guam and cooperating zoos.

6. If the work in this grant was part of a larger undertaking with other components

and funding, present a brief overview of the larger activity and the role of this project.

This project is part of the larger recovery efforts for Guam's endangered species that includes Section 6 funds for breeding Guam rails on Guam as well as breeding rails in zoological facilities participating in the Guam Rail SSP. The release of Guam rails on Rota is in cooperation with the Rota Division of Land and Natural Resources and CNMI's Department of Fish and Wildlife.

7. Describe how the objectives were met.

Ninety rails were released on Rota in FY04; 49 in Duge and 41 in Saguagaga. Both locations are past rail release sites. To reduce mortality by cat predation, 1112 trap nights caught 10 cats in the Duge area and 72 hours of spotlight hunting eliminated eight from both release sites. To induce site fidelity and reduce mortality due to starvation, 17 food tents were maintained at the release sites for six weeks after releases. Visits to the tents were monitored by placing sand around tents and number of visits were monitored daily.

This grant was extended into the following year, FY05. During this fiscal year, funds from the extended grant were used to purchase one vehicle to be used on Rota. This vehicle replaces the current vehicle (1989 model). The vehicle will be used carry out the objective of establishing the experimental population on Guam by transporting rails from the Rota airport to the release site as well as pre-release site preparation (cat removal) and post-release monitoring (rail monitoring and cat removal).

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Establishment of Experimental Population of Guam Rails on Rota and other Suitable Islands, Fiscal Year 2004, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3957, medinas@guam.net

**Endangered Species Section 6
FY 2005 Funding
(Grant Extended)
E-2-8**

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-8

Grant name: Endangered Species Section 6

Project number and name: Segment 9 Guam Endangered Species Recovery

Subproject number and name: Subproject A. Reproductive Enhancement of the Mariana Crow and Other Endangered Species. Job 2. Area Wide Control of Brown Treesnakes.

2. Report Period: October 1, 2004 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	FY05	FY06	Total Expenditure
Federal : ES Section 6 Funds	\$13,000	\$	\$	\$
State :				
Other :				
Total Federal :	\$13,000	\$	\$	\$
Total Match :				
Total Project:	\$13,000	\$	\$	\$

5. Objectives:

To protect up to 10 Mariana crow nest trees with electrical barriers and area wide snake control.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Four Mariana crow nests were discovered during the 2004-2005 breeding season. Three of the four nests were protected and maintained throughout the 21 day incubation period, however only one nest was protected using FY05 funds.

One pair laid three eggs, which were harvested and replaced with a single dummy egg. No BTS predation occurred during the incubation period because of the installation of the electrical barrier and surrounding snake traps. The eggs did not hatch. However, had the hatched the chicks were to be returned to the nest and reared by the adults. The installation of snake barriers and snake traps around Mariana crow nest trees is vital to the recovery of the wild population.

This grant was extended in FY06, however, funds were not used on this project.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Area Wide Control of Brown Treesnakes, Fiscal Year 2005, Guam Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Lloyd Blaine Dicke, Biologist II, 671-735-3996, blainedicke@yahoo.com

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-8

Grant name: Endangered Species Section 6

Project number and name: Segment 8 Guam Endangered Species Recovery

Subproject number and name: Subproject A. Reproductive Enhancement of the Mariana Crow and other endangered species. Job 3. Translocation of Mariana crows

2. Report Period: October 1, 2004 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	FY05	FY06	Total Expenditure
Federal : ES Section 6 Funds	\$37,000	\$	\$2,623.86	\$
State :				
Other : <hr/>				
Total Federal :	\$37,000	\$	\$2,623.86	\$
Total Match :				
Total Project:	\$37,000	\$	\$2,623.86	\$

5. Objectives:

- a. Translocate up to 10 Mariana crow eggs or chicks from Rota to Guam for hand-rearing and then release into the wild the following year in the Munitions Storage Area, Andersen Air Force Base, to reestablish a self-sustaining Mariana crow population on Guam.

- b. Band and collect blood samples from all chicks and hatchlings produced on Guam; and tag and instrument all birds for release with radio transmitters.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

No translocation of Mariana crows took place in FY05. Two DAWR staff made one trip to Rota in September 2005 to assist CNMI crow biologists with a population study. If the study shows Mariana crow numbers are stable on Rota then CNMI translocation permits may be reissued.

Five hand-reared crows were collected as eggs from translocated Mariana crows were radio fitted and prepared for release in FY05. These five crows will supplement the wild crow population and bring the total number of birds in the wild to 15.

This grant was extended in FY06. Funds were used to send Wildlife Biologist Jeff Quitugua to the Federal Aid Project Leaders Course, Honolulu, in May.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

No crows were translocated from Rota to Guam because the CNMI did not renew required permits.

9. List any publications or in-house reports resulting from this work.

GDAWR, Translocation of Mariana Crows, Fiscal Year 2005, Guam Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Lloyd Blaine Dicke, Biologist II, 671-735-3996, blainedicke@yahoo.com

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: E-2-8

Grant name: Endangered Species Section 6

Project number and name: Segment 8 Guam Endangered Species Recovery

Subproject and job name and number: Subproject B: Avicultural Management for Rails, Kingfishers and Crows, Job 1: Captive Propagation of Guam Rails

2. Report Period: October 1, 2004 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs:

Source	Budgeted	FY05	FY06	Total Expenditure
Federal : ES Section 6 Funds	\$196,000	\$51,748.65	\$41,825.76	\$93,574.41
State :				
Other :				
Total Federal :	\$196,000	\$51,748.65	\$41,825.76	\$93,574.41
Total Match :				
Total Project:	\$196,000	\$51,748.65	\$41,825.76	\$93,574.41

5. Objectives:

- a. Increase the number of actively breeding pairs of Guam rails at the GDAWR facilities until a maximum of 22 pairs is reached.
- b. Produce at least five Guam rails from each pair of rails annually. (Full production potential of GDAWR will be an average of 110 rails annually.)
- c. Maintain a minimum of 80 individual Guam rails at mainland zoo facilities for captive breeding.

- d. Equalize founder representation and maintain the genetic diversity of the captive flock at 90% or higher.
- e. Transfer 12 Guam rails to mainland zoos, and 12 Guam rails from zoos to the GDAWR facility every other year to maintain genetic diversity within the captive population.
- f. Build 8 ten stall (equaling 80 individual bird holding cages) steel-framed rail holding cages at GDAWR.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided all funding for endangered Guam rail captive propagation on Guam. Other funding was provided by 17 US zoological facilities participating in the Guam Rail Species Survival Plan. Each institution funded the husbandry efforts of maintaining and reproducing rails at their respective facility.

The overall goal of this effort is to increase the captive Guam rail population to supply Guam rails for release into the wild. As the majority of the captive population is located on Guam (78%), our institution is able to reproduce over 95% of rails annually.

7. Describe how the objectives were met.

Twelve pairs produced 46 rails in FY05 (average of 3.9 chicks per pair). The mainland population of rails remains below 50 and only four birds were transferred from the mainland to Guam. Founder representation was not equalized and genetic diversity stands at 88%. Two ten stall steel-framed holding cages were built utilizing funds from State Wildlife Grant funds and one was built with ES Section 6 Funds.

This grant was extended for the following year, FY06. During this fiscal year, funds from the extended grant were used to purchase various supplies (food, gravel for rail cages, etc.), equipment (for office and field), and a walk-in freezer to store dry goods for the rails.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Only 12 pairs were established in FY05, and of them, 12 were active. The inability to achieve Objective a, b, and d was due to the fact that the Wildlife Biologist in charge of the captive breeding facility retired and the position was not filled. The low number of pairs resulted in the low amount of chicks fledging at the facility. Genetic diversity remained below 90% and founder representation was not equalized (Founder 98 has half

the representatives as the other nine founders). The transfer of rails between Guam and the mainland did not take place as genetic diversity was maintained and transfers were not warranted. Only four rails were transferred from the mainland to Guam due to low breeding results in the US zoological facilities. Only three holding pens were constructed this fiscal year because of insufficient funds.

9. List any publications or in-house reports resulting from this work.

GDAWR, Captive Propagation of Guam Rails, Fiscal Year 2005, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3957, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-8

Grant name: Guam Endangered Species Section 6

Project number and name: Segment 9 Guam Endangered Species Recovery

Subproject number and name: Subproject B: Avicultural Support for Rails, Kingfishers and Crows, Job 2: Mariana Crow Aviculture Support

2. Report Period: October 1, 2004 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs:

Source	Budgeted	FY05	FY06	Total Expenditure
Federal : ES Section 6 Funds	\$39,000	\$5,398.78	\$7,653.00	\$13,051.78
State :				
Other :				
Total Federal :	\$39,000	\$5,398.78	\$7,653.00	\$13,051.78
Total Match :				
Total Project:	\$39,000	\$5,398.78	\$7,653.00	\$13,051.78

5. Objectives:

- a. From crows on Guam, produce at least one surviving nestling each year per pair through inducement of multiple clutches, including eggs, hand-rearing young, and releasing into the wild.
- b. From up to 10 crow eggs and/or chicks translocated from Rota to Guam annually, artificially incubate, hatch, hand-rear and release into the wild on Guam.

- c. Maintain outdoor aviaries for crows.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided all funding for all aviculture support for the endangered Mariana crow.

7. Describe how the objectives were met.

Five eggs were pulled from two clutches in FY05. The first clutch of three eggs was pulled for artificial incubation; however two pipped prior to the air cell drawing down while the third was malposition. All three embryos pipped blood vessels and hemorrhaged. The second clutch of two eggs died within the first trimester of artificial incubation. Prior to pulling from the wild, this clutch had three eggs, however, the day of pulling, one egg was missing. One of the pulled eggs had blood on the shell along with a piece of the missing egg's shell. The early embryo death of these two eggs is indicative to trauma occurring at the nest or during transport to the Wildlife Lab.

No crows eggs and/or chicks were translocated from Rota in FY05 due to lack of permits.

Seven crows were housed at the Wildlife Lab in FY05. Six of these crows will be released into the wild while the seventh, due to deformed feet, will remain at the lab and act as a mentor bird for future chicks.

This grant was extended for the following year, FY06. During this fiscal year, funds from the extended grant were used to construct a fence around the crow aviaries as well as purchase incubators.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Mariana Crow Aviculture Support, Fiscal Year 2005, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, (671) 735-3997, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Territory of Guam

Grant number: E-2-8

Grant name: Endangered Species Section 6

Project number and name: Segment 8 Guam Endangered Species Recovery

Subproject and job number and name: Subproject B: Avicultural Support for Rails, Kingfishers and Crows, Job 3: Captive Propagation of Guam Micronesian Kingfishers

2. Report Period: October 1, 2004 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs:

Source	Budgeted	FY05	FY06	Total Expenditure
Federal : ES Section 6 Funds	\$78,000	\$9,284.63	\$4,142.00	\$13,426.63
State :				
Other :				
Total Federal :	\$78,000	\$9,284.63	\$4,142.00	\$13,426.63
Total Match :				
Total Project:	\$78,000	\$9,284.63	\$4,142.00	\$13,426.63

5. Objectives:

- a. Bring to completion Micronesian kingfisher breeding enclosure compete with holding cages, breeding cages and security fence (Phase II and III).
- b. Upon completion of GDAWR kingfisher facility, transfer 3.3 kingfishers from mainland zoos.
- c. Begin captive breeding of kingfishers as breeding facilities are in place.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided the funds to commence the process of repatriating Micronesian kingfishers to Guam from US zoological facilities for reproduction. Other funding was provided by 11 zoological facilities participating in the Micronesian Kingfisher Species Survival Plan (SSP). Each institution funds the husbandry efforts of maintaining and reproducing kingfishers at their respective facility.

Wildlife Conservation and Restoration Program and State Wildlife Grant money funded construction of holding and captive breeding aviaries for kingfishers on Guam.

The overall goal of this effort is to increase the captive Micronesian kingfisher population to sufficient numbers to begin reintroductions in snake-controlled areas on Guam. Currently, the mainland zoological facilities are unable to accomplish this goal due to high chick and adult mortality. Efforts for GDAWR to become involved with the captive breeding program remains the highest priority on Guam and of the SSP as the Micronesian kingfisher will eventually become extinct in captivity on the mainland. It is speculated that the problems the zoo community are encountering are within their inability to completely replicate the natural diet and environment of the kingfisher as well as the population consisting of mostly hand-reared birds.

7. Describe how the objectives were met.

The sihek breeding facility was completed in FY05. GDAWR currently has three breeding enclosures and five holding pens that can house up to 20 kingfishers.

No birds were transferred from the mainland to GDAWR during FY05. Two females were scheduled to arrive in September, however they have been delayed due to *Mycobacterium avium*.

Efforts to reproduce kingfishers in FY05 were successful. Due to the lack of females on island, one pair was formed which produced three clutches totaling seven eggs. The first clutch had two eggs of which only one egg was viable. This egg hatched, however the chick disappeared after a few days. The second clutch consisted of three fertile eggs. One egg was brought to the Wildlife Lab where it successfully hatched and was hand-reared. The fate of one egg is unknown though it is presumed to of hatched while the third egg was found lodged at the base of the nest hole covered with wood shavings. The third clutch consisted of two fertile eggs. Of this clutch, one chick was reared at the lab while the second was kept in the nest log. GDAWR staff supplemental fed the chick in the nest for 12 days at four times per day. At the 12th day, the male became involved with feeding the chick and by the 15th day, GDAWR staff no longer needed to supplemental feed. A total of three chicks fledged on Guam this fiscal year.

The grant was extended for the following year, FY06. During this fiscal year, funds were spent purchasing their main food source of geckos.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs. N/A

9. List any publications or in-house reports resulting from this work.

GDAWR, Captive Propagation of Guam Micronesian Kingfishers, Fiscal Year 2005, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-735-3997, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-8

Grant name: Guam Endangered Species Recovery

Project number and name: Segment 8 Guam Endangered Species Recovery

Subproject number and name: Subproject C: Development of an experimental population of Guam rails on Rota and other Suitable Islands, Job 1: Establishment of Experimental Population of Guam Rails on Rota and other Suitable Islands

2. Report Period: October 1, 2004 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Rota, Commonwealth of the Northern Mariana Islands

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	FY04	FY05	Total Expenditure
Federal : ES Section 6 Funds	\$46,189	\$49,656.67	\$707.30	\$50,363.97
State :				
Other :				
Total Federal :	\$46,189	\$49,656.67	\$707.30	\$50,363.97
Total Match :				
Total Project:	\$46,189	\$49,646.67	\$707.30	\$50,363.97

5. Objectives:

- a. Release at least 100 rails from the captive breeding program at the GDAWR and mainland zoo facilities in the Gampapa and Duge areas, Rota. The rails should be genetically unimportant to the maintenance of the captive gene pool (*i.e.* from

over-represented family lines) and in excess numbers needed for maintaining the integrity of the captive populations.

- b. Monitor survival, dispersal, reproduction and establishment of released rails through radio telemetry and surveys.
- c. Identify and eliminate or control factors limiting establishment of rails in the wild on Rota, including trapping and removal of feral cats, monitor lizards, rats, and other potential predators.
- d. Trap wild rails and harness with radio transmitters to gain further knowledge of rail behavior and territory size.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project. N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Only twelve rails were released in FY05. All rails had transmitters and telemetry was used (555 bearings) to determine locations of the birds and monitor survival, dispersal, reproduction and establishment. Seventy-seven cats and 2 monitor lizards were trapped in approximately 4050 trap nights on Rota using live traps and leg-hold traps.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

The release objective of 100 rails was not met in FY05 because the breeding facility was unable to produce sufficient numbers for release. Also, wild rails were not trapped on Rota due to low population densities.

9. List any publications or in-house reports resulting from this work.

GDAWR, Establishment of Experimental Population of Guam Rails on Rota and other Suitable Islands, Fiscal Year 2005, Guam Division of Aquatic and Wildlife Resources, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Paul Wenninger, Biologist II, 671-735-3994, pwenninger@yahoo.com

Endangered Species Section 6
FY 2006
E-2-9

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-9

Grant name: Endangered Species Section 6

Project number and name: Segment 9 Guam Endangered Species Recovery

Subproject and job number and name: Subproject A: Avicultural Management for Rails, Kingfishers and Crows, Job 1: Captive Propagation of Guam Rails

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : _____	\$179,312	\$7,773.05
State		
Other: _____		

Total Federal	\$179,312	\$7,773.05
Total match		
Total project:	\$179,312	\$7,773.05

5. Objectives:

- a. Increase the number of actively breeding pairs of Guam rails at the GDAWR facilities until a maximum of 22 pairs is reached.
- b. Produced at least five Guam rails from each pair of rails annually. (Full

- production potential of GDAWR will be an average of 110 rails annually.)
- c. Maintain a minimum of 40 individual Guam rails at mainland zoo facilities for captive breeding.
 - d. Equalize founder representation and maintain the genetic diversity of the captive flock at 90% or higher.
 - e. Transfer three ko'ko' to mainland zoos, and 25 ko'ko' from zoos to the GDAWR facility every year to maintain genetic diversity within the captive population, as well as support the release program.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided all funding for endangered Guam rail captive propagation on Guam. Other funding was provided by 17 US zoological facilities participating in the Guam Rail Species Survival Plan. Each institution funded the husbandry efforts of maintaining and reproducing rails at their respective facility.

The overall goal of this effort is to increase the captive Guam rail population to supply Guam rails for release into the wild. As the majority of the captive population is located on Guam (78%), our institution is able to reproduce over 95% of rails annually.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Twenty-two pairs produced sixty-six chicks that were banded and added to the captive flock in FY06 (average 3 chicks per pair). Ten deaths occurred at the facility: three from old age related illnesses, one ingested a wire and died after surgery, two from mate trauma, two killed by neighboring birds, and two cause of deaths unknown. Ninety-eight rails were transported to Rota and 96 were released (two arrived dead). Genetic diversity at the Guam facility remains at 88.5% and three rails were transferred from the mainland to Guam from the Milwaukee County Zoo. Wildlife Biologist II Caplan Anderson was hired to manage the Guam Rail Captive Breeding Facility and the Wildlife Lab.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Although the Guam facility achieved its objective of having 22 pairs, not all pairs successfully hatched eggs or fledged chicks. The hiring of Wildlife Biologist Caplan Anderson in April has greatly increased breeding in the facility and our reproductive goals are expected to be achieved in the upcoming fiscal year. Genetic diversity below the desired goal of 90% is due to behavior difficulties within genetically compatible

pairs.

9. List any publications or in-house reports resulting from this work.

GDAWR, Captive Propagation of Guam Rails, Fiscal Year 2006, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-735-3985, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-9

Grant name: Endangered Species Section 6

Project number and name: Segment 9 Guam Endangered Species Recovery

Subproject and job number and name: Subproject A: Avicultural Management for Rails, Kingfishers and Crows, Job 2: Mariana Crow Avicultural Support

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual <u>or</u> Estimated <u>X</u>
Federal : _____	\$48,821	\$2,615.48
State _____		
Other: _____		
Total Federal	\$48,821	\$2,615.48
Total match		
Total project:	\$48,821	\$2,615.48

5. Objectives:

- a. Artificially incubate, hatch, hand-rear and release back into the wild up to nine eggs from nests on Guam.
- b. Prevent imprinting by rearing aga with broodmates and mentor birds.
- c. Maintain outdoor aviaries for crows.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provides all funding for aviculture support for the Mariana crow (aga). This work is part of a larger undertaking to reestablish Mariana crows in northern Guam. Other grants, such as Office of Insular Affairs Brown Treesnake Control Grant and the Department of Defense Civil Engineering Environmental Section grant fund area-wide snake control measures and the installation of brown treesnake barriers on active Mariana crow nesting trees. Guam Wildlife Restoration Grant W-1R-14 supports search and inventory of released crows.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Only two eggs were pulled for artificial incubation this fiscal year. In October, the first egg never completed circulation and the embryo did not hatch (malposition). In December, the second egg failed to hatch because of insufficient weight loss.

Supplemental feeding was provided to two pairs in the wild, both which nested and had chicks. Two crows, one non-releasable, were housed at GDAWR.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

Due to only two females in the wild, nine eggs were not reproduced in the wild.

9. List any publications or in-house reports resulting from this work.

GDAWR, Mariana Crow Aviculture Report, Fiscal Year 2006, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-735-3997, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-9

Grant name: Endangered Species Section 6

Project number and name: Segment 9 Guam Endangered Species Recovery

Subproject and job number and name: Subproject A: Avicultural Management for Rails, Kingfishers and Crows, Job 3: Captive Propagation of Guam Micronesian Kingfishers

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated".

Source	Budgeted	Actual or Estimated <u>X</u>
Federal :	\$60,000	\$10,686.00
State		
Other:		
Total Federal	\$60,000	\$10,686.00
Total match		
Total project:	\$60,000	\$10,686.00

5. Objectives:

- a. Transfer 2.3 (males.females) to GDAWR in FY06.
- b. Reproduce at least one chick from three pairs in FY06.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

This grant provided the funds to captive breed Guam Micronesian kingfishers on Guam.

Other funding was provided by 11 zoological facilities participating in the Micronesian Kingfisher Species Survival Plan (SSP). Each institution funds the husbandry efforts of maintaining and reproducing kingfishers at their respective facility.

The overall goal of this effort is to increase the captive Micronesian kingfisher population to sufficient numbers to begin reintroductions in snake-controlled areas on Guam.

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

No objectives were met in FY06.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs.

GDAWR is still waiting for the arrival of two females from the Smithsonian's Conservation Research Center (CRC). These birds were delayed due to positive *Mycobacterium avium* cultures. Communication has been established between the Guam Territorial Veterinarian and CRC and the females are now scheduled to arrive in January 2007.

No reproduction took place on Guam this fiscal year as GDAWR's only adult female died in October 2005, leaving the facility with no breeding females.

Funds were spent this fiscal year on maintaining Guam's captive kingfisher population, consisting on three adult males, two juvenile males, and one juvenile female.

9. List any publications or in-house reports resulting from this work.

GDAWR, Captive Propagation of Guam Micronesian Kingfishers, Fiscal Year 2006, Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

Suzanne Medina, Wildlife Biologist III, 671-735-3997, medinas@guam.net

Interim Performance Report

Guam Division of Aquatic and Wildlife Resources, Department of Agriculture
FY 2006

1. State: Guam

Grant number: E-2-9

Grant name: Segment 9 Guam Endangered Species Recovery

Subproject and job number and name: Sub-Project B: Development of an Experimental Population of Guam Rails on Rota and Other Suitable Islands, Job 1: Establishment of Experimental Population of Guam Rails on Rota and Other Suitable Islands.

2. Report Period: October 1, 2005 to September 30, 2006

Report due date: December 31, 2006 [extended to March 31, 2007]

3. Location of work: Guam

4. Costs: Please identify sources of federal funds and match and indicate amounts budgeted and spent for each. Indicate if match is in-kind. Indicate in table whether costs are "Actual" or "Estimated"

Source	Budgeted	Actual or Estimated <u>X</u>
Federal : _____	\$30,000	\$15,544.01
State _____		
Other: _____		

Total Federal	\$30,000	\$15,544.01
Total match		
Total project:	\$30,000	\$15,544.01

5. Objectives:

- a. Release at least 100 captive bred koko' on Rota. The ko'ko' should be genetically unimportant to the maintenance of the captive gene pool and in excess of numbers needed for maintaining the integrity of the captive populations.
- b. Monitor survival, dispersal, reproduction and establishment of released rails through radio telemetry and surveys.
- c. Identify and eliminate or control factors limiting establishment of rails in the wild

on Rota, including trapping and removal of feral cats, monitor lizards, rats and other potential predators.

6. If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.

N/A

7. Describe how the objectives were met. See “Supplemental Information” for additional requirements and “Attachments” for specialized tables.

Ninety-four rails were released on Rota this fiscal year. The first release of 43 rails took place in Apanon in November. This is the first time rails have been released in this area. Rails were hard released and ten had transmitters. In March, two pairs with transmitters were soft released 0.5km from Apanon in Taimanao. This is the second soft release of pairs in Taimanao. The last release was of 47 rails in Apanon in September. No rails in the last release had transmitters.

Of the 14 birds released with transmitters, two were killed by cats, two were killed by monitors, two dropped transmitters, and eight have unknown fates. Territory establishment, pairing and incubation were detected in three pairs before their transmitters failed. Two rails dispersed as far 0.5km from the Apanon release site. In addition, a pair that was soft released in Taimanao land in April 2005 were tracked through March 2006. The pair established a territory at the release site and had at least two sets of chicks by the time their transmitters failed.

Tomahawk live traps baited with dried fish and Bagong shrimp paste was used to capture seven cats and two monitor lizards in 886 trap nights on Rota. One monitor was opportunistically shot. Animals were dispatched using a 22-caliber air rifle.

8. Discuss differences between work anticipated in grant proposal and grant agreement, and that actually carried out with Federal Aid grant funds; include differences between expected and actual costs

We did not meet the objective of releasing 100 rails (94 released) because we lacked six eligible individuals from our breeding population.

9. List any publications or in-house reports resulting from this work.

N/A

GDAWR, Establishment of Experimental Population of Guam Rails on Rota and Other Suitable Islands, Fiscal Year 2006. Guam's Division of Aquatic and Wildlife Resources' Annual Report, Department of Agriculture.

Name, title, phone number, and e-mail address of person compiling this report:

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